Sparton Changes to Conventional Units & Adds Many Gadgets

(Concluded from Page 1, Column 1)

not require refrigeration. This compartment is located at the bottom of the refrigerator, just in front of the compressor.

Previous Sparton refrigerators have had a direct drive compressor located in the top. This season the compressor is a conventional, reciprocating, belt-driven machine, placed in the bottom of the cabinet.

Rise of independent service companies was given by Sparton officials as the reason for the change. Speaking before the fourth annual Sparks-Withington refrigerator convention here last week-end, Harley Wall of the refrigeration department explained this development as follows:

"Sparton's mechanical unit has been completely changed in the interest of economy, faster freezing, and service convenience. It required much persuasion by the sales department, combined with actual field statistics, to bring this change about.

"In 1932 Sparton adopted an unusual type of compressor which prevented field service men from doing anything other than to exchange units. This was a policy promoted by the General Electric Co. and confirmed by Westinghouse.

"It will be recalled that in 1932, G-E had made the most spectacular advance in the domestic refrigerator field ever known in the industry. This policy was based upon the fact that there could be no service rendered in the home. In the event of failure, the integral unit would be removed and sent to the factory where skilled workmen would make repairs.

"In the light of this knowledge and experience, the unit Sparton presented in 1932 seemed to us the most logical type to build in order to promote sales and lessen resistance, because it would furnish sales ammunition for the dealer to use in closing consumer sales.

In the last two years, this trend has definitely been changing. The increasingly large number of electric refrigerators in use, together with the large number of manufacturers using conventional type units, has prompted the forming of refrigeration service organizations throughout the country with expertly trained men to furnish prompt service on most any field service unit.

"The General Electric Co. recognized the value of the cooperation of these organized service corporations about two years ago, and brought out a conventional type in 1933.

"While Sparton has never used a hermetically sealed unit, the type of Sparton's unit did hinder field men considerably from opening up the compressor, making necessary repairs, and collecting the resultant service fee.

"Sensing the unfriendly attitude of service organizations who frowned upon this type of unit, Sparton endeavored in 1934 to satisfy them in part by putting valves on the unit so that it was possible to remove the compressor and motor and leave the remainder of the unit intact.

"However, even with those changes, it will still be necessary for the motor compressor unit to be returned to the factory for overhauling, unless the distributor wished to make an investment in rather elaborate and costly equipment which could be used only for units of Sparton type.

"The adding of valves in 1934 was watched very carefully by the Sparton factory in order to weigh the service man's attitude. While it was found that there was a more cooperative attitude than in previous years, it was known that, as a whole, their recommendations to prospective buyers still showed very outspoken criticism of any unit which prevented local service and overhauling if necessary.

"In abating resentment of the service organizations, Sparton is aware that the largest percentage of its unsold market still remains in small cities, towns, and rural communities where, with its previous type of unit, we are subjecting the dealer to unnecessary replacement unit investment.

"This was due to the dealer's inability to give personal service in the field or acquire the services of some local individual or organization who would be competent to take care of major or minor adjustments if the unit had been made accessible."

Sparton's 1935 compressor has forced-feed lubrication, built-in oil separators, diamond bored and bearing sized cylinders, connecting rod and eccentric, lapped-in pistons (no rings), guided bellows type seal, positive suction and discharge valves of Swedish steel, a ⅛-hp. motor, and turbo type noiseless fan. The 1935 line uses the same dry expansion system as previously used in all Sparton refrigerators.

A porcelain baffle, placed about an inch away from the evaporator coils, is designed to aid air circulation. Some models have a porcelain evaporator door.

All boxes are finished in lacquer. Only the lowest priced job has legs; the others have a streamlined base—some black, others white. A black band runs around the top part of the cabinet, which is moderately streamlined.

Brief listing of specifications of the refrigerators are given at the bottom of this page.

Headed by the 13-tube, 3-speaker (providing 155 sq. in. of sound-reproducing speaker surface) Triolian model, which lists at $256, the 1935 Sparton radio line comprises seven consoles, four table sets, and an automobile radio.

Listing at $235, model 85-AX has a 10-tube all-wave set plus an automatic record-selecting phonograph, which plays eight 10-in. records without manual attention.

The elaborately ornate Embassy model, priced at $200, will be the window display model of the line this year. This heavy piece of furniture gives no hint of being a radio until doors are opened. The speaker, which is allied with a sounding board, invisibly, pours out its tones through the bottom of the cabinet. A 10-tube all-wave chassis is incorporated.

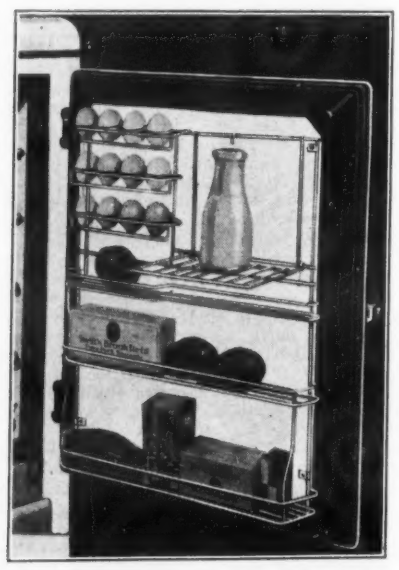
In a console listing for $159.50 the same all-wave chassis is employed.

An eight-tube all-wave superheterodyne chassis is employed in a six-legged lowbody with doors at $139.50, a modern console at $124.50, and a table set at $89.50.

A six-tube two-band set has been placed in a console at $69.50 and a table set at $49.50. Foreign reception is also afforded by a six-tube a.c.-d.c. model at $39.95. Another a.c.-d.c. set (five tubes) lists at $29.95.

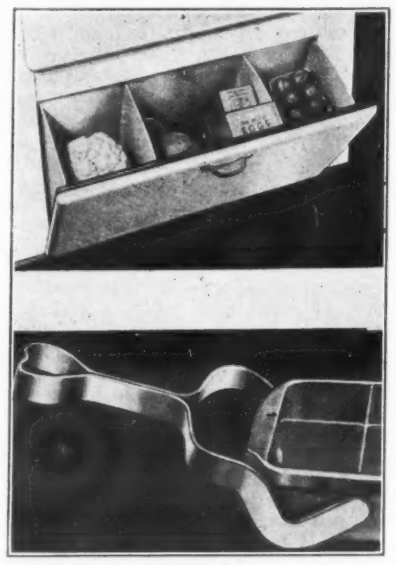
Two auto radios, one a five-tuber at $39.95 and the other a six-tube superheterodyne with 6-in. detachable speaker and dash-or-steering-column mounted remote control at $55, complete the line.

'Baskador'



The 'Baskador,' illustrated above, is one of the new Sparton's prime features. Note the wire shelf on which the milk bottle has been placed.

Sparton Additions



At the top is the 'Vegabin,' a swing-open compartment for bulky foodstuffs. Below is shown the trigger ice cube release.

Viso-Glo Tuning

Special feature of the Sparton radio line is Viso-Glo tuning. By means of a metallic "star" on the cabinet, one may tune in a set with the volume control down. At the point where best tonal performance and maximum volume of a station have been reached, a neon light within the "star" glows most brightly.

Crowded into an intensive two-day-and-night sessions were expositions on and exhibitions of Sparton's 1935 refrigerator and radio lines by Ed Hutchinson and Arthur Haugh; presentation of advertising and sales promotion programs by Advertising Manager Guy C. Core and Ed Wade, vice president of United States Advertising Corp.; discussion of financing plans by Treasurer Harold M. Johnston; elucidation of new Sparton refrigerator features by Harley Wall; a talk on manufacturing methods by W. J. Corbett, vice president in charge of production; elucidation of service policy by J. J. Lynch, service manager; a private audition of the new Sparton radio program; a trip through the factories; and a banquet.

Major Withington Present

Major Winthrop Withington, chairman of the board, made a slippery auto journey from Cleveland to give the address of welcome. Capt. William Sparks talked at the banquet, foreseeing much brighter times in 1935, but requesting all his auditors to write to their congressmen protesting against the 30-hour week idea.

Vice President Harry G. Sparks had general charge of the meeting, and acted as toastmaster, interlocutor, prompter, and most frequent speaker.

Some 120 representatives of Sparks-Withington distributorships, and field men, were present.

Sparton returns to the air Sunday, Feb. 10. In keeping with its enlarged plans for 1935, the Sparks-Withington Co. is extending its 15-minute program to a full half-hour schedule. The new time will be from 4 to 4:30 p. m. each Sunday.

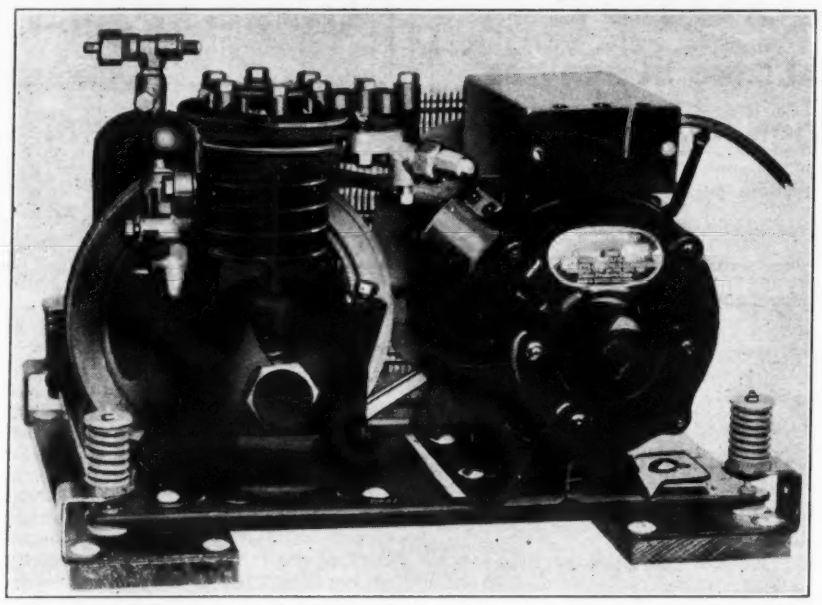
Broadcasts will continue from Radio City in New York. Jolly Coburn and his Triolians, including the Sparton Embassy Choir of eight voices, will be heard.

In addition to the National Broadcasting Co.'s Blue Network, consisting of New York City (WJZ), Boston (WBZ), Springfield (WBZA), Philadelphia (WF1-WLIT), Baltimore (WBAL), Washington, D. C. (WMAL), Syracuse, N. Y. (WSYR), Rochester, N. Y. (WHAM), Pittsburgh (KDKA), Cleveland, Detroit, Cincinnati (WCKY), Chicago (WENR-WLS), St. Louis, Cedar Rapids (KWCR), Des Moines (KSO), Omaha-Council Bluffs (KOIL), and Kansas City (WREN), Sparton may add supplemental stations if time is available.

Key Specifications of New Spartons

Model No.	465	D465	D525	D615	D745	D905
Overall Dimensions (in.)						
Height	54⅞	56⅞	54⅞	54⅞	54⅞	57½
Width	23⅝	23⅝	27¼	27¼	29¼	35¼
Depth	21⅝	21⅝	24¾	24¾	27⅝	28⅜
Storage Capacity						
Gross food storage (cu. ft.)	4.6	4.6	5.2	6.1	7.4	9.0
Total shelf area (sq. ft.)	8.7	8.7	9.4	11.8	14.2	17.1
Ice Cube Trays						
No. of trays	3	3	3	5	5	6
No. of cubes	42	42	42	70	70	84
Weight of cubes (lbs.)	4.1	4.1	4.1	6.7	6.7	9.3
Thickness of Insulation (in.)						
Sides	2⅜	2⅜	2⅜	2⅜	2⅜	3⅜
Bottom	2⅞	2⅞	2⅞	2⅞	2⅞	3⅞
Door	2⅝	2⅝	2½	2½	2½	3⅜
Retail Price	$119.50	$139.50	$158.50	$189.50	$215	$256

Built for Independent Service



By redesigning its compressor along more conventional lines Sparton has made it possible for independent service men to repair units in the field.

G-E Kitchen Installed In 'Perfect Home' At St. Louis

ST. LOUIS—An all-electric kitchen, designed and installed by James & Co., General Electric distributor for this city, was featured in the "Perfect Home," a house erected in St. Louis Hills by the St. Louis chapter of the American Institute of Architects, aided by the *Times-Star* and the Cyrus Crane Willmore organization.

The home was designed for the average individual at moderate construction cost and contained as much in the way of new equipment as possible.

Kitchen equipment included a General Elecrtic refrigerator, range, dishwasher, percolator, mixer, and other small kitchen appliances. A washer, hand iron, and flat plate ironer are in the laundry, while the household equipment includes a vacuum cleaner, room heater, and fan.

Former G-E Refrigeration Executive Dies

SCHENECTADY—Paul Boyd, general assistant in the aeronautics and marine department of the General Electric Co., and at one time a member of G-E's refrigeration department, died at his home in Schenectady, Dec. 26, of a heart attack. He was 48 years old.

Mr. Boyd joined the G-E organization in 1906 as a member of the publicity department. In 1926 he entered the central station department's refrigerator sales division and later went to Cleveland with the refrigerator department.

He was transferred in 1929 to the position he held at the time of his death.

Electrolux Makes Cabinet Changes

(Concluded from Page 1, Column 1)

up to permit the storage of bottles and other tall containers, and which, tilted back, can be used as an extra storage space for food; basket-like racks, suspended from a shelf, for the storage of eggs and vegetables; and a leaf-vegetable freshener which fits into the lower shelf.

In addition, there is a deep tray for the making of large ice cubes or frozen desserts, and a fast freezing adjustment, located outside the evaporator, which may also be utilized for defrosting without stopping the refrigerating cycle.

The silent Electrolux freezing principle is unchanged.

Six of the models are available in Newtone, a new non-porcelain exterior finish highly resistant to grease, water, and rust, and the three largest sizes may also be had in porcelain. The seventh model, in combination gas range and refrigerator of 2.95-cu. ft. capacity, is finished in lacquer. Food storage capacities in the standard models range from 3.51 cu. ft. to 10.4 cu. ft.

Models have been tagged with names intended to facilitate their identification as well as to indicate their standing and price ranking in the line.

Largest model is the "Empress," with a shelf area of 18.65 sq. ft., and a food capacity of 10.4 cu. ft. It is designated as F-100. A double-door model, it has six ice trays with a capacity of 72 cubes, an extra-large freezing unit, and three storage trays attached to the inside of the door.

The "Queen" (F-70) has a capacity of 7 cu. ft. and a shelf area of 13.31 sq. ft. This model carries three ice trays with a capacity of 60 cubes. The "Princess" (F-50), with a food capacity of 5 cu. ft. and a shelf area of 10.47 sq. ft., has two ice cube trays capable of freezing 48 cubes.

All of the "F" models are available in porcelain finish. In addition to the several features listed above, these units are also equipped with automatic interior lighting.

Other models include the "Countess" (APTF-35) and the "Baroness" (APTSF-35) with shelf areas of 7.65 sq. ft. and food capacities of 3.51 cu. ft., and equipped with an ice tray of 36-cube capacity. These models, intended especially for use in modern apartment houses, are very similar with the exception that the "Baroness" unit carries the freezing control and a sealed evaporator unit.

The "Duchess" model (SF-45) with a food capacity of 4.5 cu. ft., and 9 sq. ft. of shelf area, carries two ice trays which freeze 36 cubes.

The combination range-refrigerator unit, designated as the "Manhattan" (EE-30A) may also be obtained in the table-height model only. Its shelf area is 5.08 sq. ft. and its food capacity 2.95 cu. ft. The single ice tray has a capacity of 24 cubes.

The entire line is also available for use with kerosene instead of gas, and is designed for farm, village, and suburban homes, summer cottages, mountain lodges, roadside stands, and other locations not gas-equipped.

Copeland

DEPENDABLE *ELECTRIC* REFRIGERATION

VOLUME

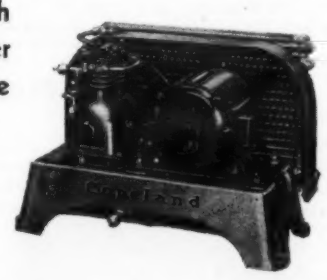
Volume business at a profit.
Year-Round turnover.
Repeat orders from satisfied customers.

These three requirements for happiness in a business enterprise are enjoyed by distributors of Copeland Commercial Condensing Units.

Volume is reached because of the complete character of the line, affording a suitable unit for any type of requirement in refrigeration.

Year-round turnover is possible because commercial refrigeration need have no slack season.

Repeat orders originate through the satisfaction of the customer with the dependability of these units.



Some territory is available for qualified distributors who are invited to write for details.

COPELAND REFRIGERATION CORP., Detroit, Mich.
Main Office and Factory—Holden at Lincoln Ave.
Division of DALLAS E. WINSLOW, Inc.

62

THE NEWSPAPER OF THE INDUSTRY

ELECTRIC REFRIGERATION NEWS

WRITTEN TO BE READ ON ARRIVAL

Registered U. S. Patent Office

ESTABLISHED 1926. MEMBER AUDIT BUREAU OF CIRCULATIONS. MEMBER ASSOCIATED BUSINESS PAPERS. MEMBER PERIODICAL PUBLISHERS INSTITUTE.

VOL. 14, NO. 5, SERIAL NO. 306
ISSUED EVERY WEEK

Copyright, 1935, by Business News Pub. Co.

DETROIT, MICHIGAN, JANUARY 30, 1935

Entered as second-class matter Aug. 1, 1927

THREE DOLLARS PER YEAR
TEN CENTS PER COPY

Home Service Plans Outlined By Kelvinator

Economists Growing Part In Actual Sales Work Told at Convention

By Frances McNamara

DETROIT—That dealers and salesmen are recognizing the fact that home economists can now actually sell from the dealer's floor as well as make contacts that may develop into prospects, was brought out by several speakers at the second annual four-day Kelvinator home economists' convention held here last week. Sixty-three home economists, representing distributors, dealers, and utilities, from all sections of the country and Canada, attended the convention.

The 1935 program of Kelvin Kitchen activities—cooking schools, hostess schools, cooperative newspaper schools, home parties, window demonstrations, garden parties, etc.—was outlined by various home economists.

Brief talks were given by Miss Sarah Field Splint, director of food and home management of *McCall's* magazine; Miss Lucy Maltby, Corning Glass Co.; Miss Katherine Bayley Caldwell, *Canadian Journal*; Miss Helen Campbell, *Chatelaine* magazine. Miss Helen Kimball of the Borden Co., due to an injury received in a taxi accident, was unable to attend the convention.

Featured on the convention program were three famous chefs—George Rector of the Atlantic & Pacific Tea Co., New York City; Jacques Gesell, supervising chef, National Hotel Management Co., New York City; and Otto, chef, Lee Plaza, Detroit.

In her talk on "Sell Your Merchandise," Miss Eva McPherson of Kelvin Kitchen stated that, since the majority of people which the home economist contacts belong to the $125-a-month income group, deluxe models should not be stressed.

The home economist, Miss McPher-

(Concluded on Page 13, Column 1)

Valves, Fittings Code Budget Is Submitted

WASHINGTON, D. C.—Budget for the expense of administering the NRA code for the Refrigeration Valves & Fittings Manufacturing Industry, for the period from Sept. 17, 1934 to June 16, 1935, was set at $5,475, in the application to the NRA board for approval.

The basis of contribution, on an estimated sales volume of $1,100,000 for the first nine months of the year 1934, will be ½ of 1 per cent on the sales of the previous year (1933).

Nicholson to Head Sales Of Baltimore Hub Store

BALTIMORE—Robert J. Nicholson, former manager of the Frigidaire retail branch at Towson, Md., recently succeeded L. R. Pelzman as manager and buyer for the refrigeration department of The Hub, department store of this city. Mr. Nicholson is also in charge of electric washers and appliances.

Electromaster Will Build Range for Kelvinator

DETROIT — Electromaster, Inc., manufacturer of electric ranges, has completed an agreement with Kelvinator Corp. to manufacture a line of ranges bearing the Kelvinator name. The company will continue to sell the Electromaster line through its own distributor channels.

The Kelvinator ranges will be marketed temporarily through six factory-operated sales branches in Atlanta, Boston, Buffalo, Chicago, New York City, and Detroit, although it is anticipated that later all of Kelvinator's selling channels will be used.

At Electromaster's annual stockholders meeting here last week, a profit of approximately 31 cents per share of common stock was announced by President R. B. Marshall, after provision for income note interest and estimated Federal income taxes.

Elected to the board of directors for 1935 were: J. M. Hutton, Jr., of W. C. Hutton & Co., Detroit; Mr. Marshall; E. R. Genthe, treasurer of the company; H. H. Hubbard, secretary, and Howard A. Lewis, treasurer of Kelvinator Corp.

Fedders Opens N. Y. Factory Branch

NEW YORK CITY—A new Fedders factory branch has been opened at 106 East 19th St., here, with Frank Haag, formerly branch manager at Cincinnati, in charge.

A large stock of Fedders standard refrigeration appliances and automotive radiator cores is being carried at the branch for distribution. Melchior, Armstrong, Dessau Co. will continue to represent Fedders from their New York City, Boston, and Philadelphia offices.

10,428 Units Sold By Georgia Power

ATLANTA—Refrigerator sales of the Georgia Power Co. for the 12 months of 1934 totalled 10,428 units as compared with 3,619 units sold during the year 1933.

The 1934 appliance merchandise dollar volume was $2,579,142.18 against the year's quota of $1,628,000, or 158.4 per cent of quota.

Electric range unit sales totalled 3,577 in 1934 as against 652 the preceding year. Other appliance sales, made by the power company during 1934, included 16,075 portable lamps, 20,261 irons, 911 washers, 314 ironers, 1,585 heating pads, 1,569 space heaters, 1,680 waffle irons, 421,511 Mazda lamps, 276 water pumps, 940 toasters, and 2,638 percolators.

Louisiana Utility Takes Westinghouse Line

BATON ROUGE, La.—After several years of confining its electric refrigerator activity to a program of dealer cooperation, the Baton Rouge Electric Co. has taken over an exclusive Westinghouse dealership. A series of inter-organization meetings, led by W. B. Creech, Westinghouse supervisor, inaugurated selling activities.

Manufacture of Units Continued By Jewett Co.

Potter Fails to Exercise Option on Purchase of Jewett Plant

BUFFALO — The Jewett Refrigerator Co. will continue to manufacture household electric refrigerators under the Jewett brand name, declares Edgar B. Jewett, president.

Last August it was announced that T. Irving Potter, president of the Potter Refrigerator Corp., had purchased the name, assets, and good will of the company, and would manufacture refrigerators in its Letchworth Ave. plant.

Mr. Potter, however, has not found it convenient to exercise the option granted him by the Jewett Co. last fall, and so the owners will continue to operate the plant. In addition to domestic electric refrigerators, specially constructed units for hotels, hospitals, clubs, and large institutions will be produced.

The Jewett Refrigerator Co. is one of the oldest in the industry, having been organized in 1849. During its 85 years it has become best known as a manufacturer of custom-built refrigerators for fine homes, and only recently entered the domestic field.

Lindsay Made Head Of Crosley Exports

CINCINNATI — A. G. L. Lindsay, formerly vice president of Associated Radio Industries and Refrigerator Products Co., New York, exporter of radio sets, electric refrigerators, and parts, has been appointed manager of the foreign department of Crosley Radio Corp., according to Powel Crosley, Jr., president. Mr. Lindsay will succeed the late C. J. Hopkins.

Mr. Lindsay began his business career as secretary to a director at the Banque Continentale of Paris, France. While accompanying him on a 10 months' business trip around the world, Mr. Lindsay established a contact with a South American distributor for the old Victor Talking Machine Co. In 1912, he became an executive of that organization.

In 1926, he joined the reorganized Columbia Graphophone Co. in an executive export position. In 1930, Mr. Lindsay was appointed general sales manager in South America for the Brunswick Radio Corp., and later became commercial vice president of the Pilot Radio & Tube Corp., of Lawrence, Mass. Two years ago, he formed his own export organization.

Crosley Distributor Extends Territory

BALTIMORE—Lincoln Sales, Inc., distributor here for the Crosley refrigerator line, has extended its distributing area to the counties of Kent and Sussex in Delaware and Accomac and Northampton in Virginia.

Charles Leonard, formerly with the Westinghouse organization, has been appointed assistant to L. Fox in covering metropolitan Baltimore, and H. H. Windfohr is sales representative for the eastern shore territory.

Promoted by G-E

W. D. Galpin

New manager of the retail division of General Electric's specialty appliance sales department.

G-E Opens Regional Meetings This Week

CLEVELAND — General Electric begins today (Jan. 30) its series of regional meetings, at which the 1935 G-E line of household equipment will be introduced to distributor groups in 54 key cities in all sections of the country.

Three troupes of actors, carrying complete stage properties and scenery, will present the 1935 sales story in a four-hour program. Troupes will travel east, west, and south, with this city as headquarters.

The western troupe opens its tour today in Indianapolis, and going on to St. Louis for another showing tomorrow. Rest of its itinerary includes: Kansas City, Feb. 1; Oklahoma City, Feb. 4; Dallas, Tex., Feb. 5; Houston, Tex., Feb. 6; El Paso, Tex., Feb. 8; Los Angeles, Feb. 11; Fresno, Calif., Feb. 13; San Francisco, Feb. 15; Medford, Ore., Feb. 18; Portland, Ore., Feb. 19; Seattle, Feb. 20; Spokane, Feb. 22; Salt Lake City, Feb. 25; Denver, Feb. 27; Omaha, March 1; Des Moines, March 4; Davenport, Iowa,

(Concluded on Page 2, Column 5)

Motor Parts Co. Named Gibson Distributor

PHILADELPHIA—Motor Parts Co. of this city has been designated distributor of Gibson electric refrigerators in Philadelphia, Lancaster, Reading, York, Harrisburg, and other eastern Pennsylvania sections. Jack Marden is sales manager of the company.

1934 Budget Approved for Commercial Code

WASHINGTON, D. C.—A budget of $27,350 for the calendar year of 1934 for the commercial refrigerator manufacturing industry was recently approved by the NRA board. The budget provides that an assessment be paid of three-tenths of 1 per cent of dollar volume of net sales, payable monthly, and based on preceding month's sales.

30 Distributors Of Conservador Line Appointed

Fairbanks-Morse Names New Distributors for Refrigerators

CHICAGO — Fairbanks-Morse Home Appliances, Inc., division of Fairbanks-Morse & Co., has appointed 30 wholesale organizations to distribute its 1935 line of Conservador electric refrigerators.

The Conservador distributors are: Appliances, Inc., Cincinnati; Brown Lynch-Scott Co., Monmouth, Ill.; Bruno-New York, Inc., New York City; Robert F. Clark Co., Denver; Chisholm Supply Co., Greenville, S. C.; Edwards & Walker Co., Portland, Me.; Esenbe Co., Pittsburgh; E. Garnich & Sons Hdwe. Co., Ashland, Wis.; Gilbert Bros., Portland, Ore.

Horrocks-Ibbotson Co., Utica and Syracuse, N. Y.; Hunt & Mottet Co., Tacoma, Wash.; Jenkins Music Co., Kansas City, Tulsa, Oklahoma City, and Wichita, Kan.; Johnson-Menard, Inc., Chicago; Motor Power Equipment Co., St. Paul; Ozburn-Abston Co., Memphis, Tenn.; Proudfit Sporting Goods Co., Ogden, Utah; Republic Supply Corp., Detroit.

Rice & Miller Co., Bangor, Me.; Roskin Bros., Boston, Albany, N. Y., and Middletown, N. Y.; Globe Electric Co., Seattle; Mory Sales Co., New Haven, Conn.; Charles E. Turnock Co., Milwaukee; A. H. Wherry, Jr., Chester, S. C.; Wimberly & Thomas Hdwe. Co., Birmingham; Fineburg's, Trenton, N. J.

Capital Paper Co., Indianapolis; Buffalo Nipple & Machine Co., Buffalo, and Herring-Wissler Co., Des Moines.

Stearns Dept. Store To Handle G-E's

HARRISBURG, Pa.—L. L. Stearns department store, Williamsport, Pa., has been appointed dealer for General Electric household refrigerators, dishwashers, ranges, workshops, home laundry equipment, vacuum cleaners, and radios, reports W. C. Jones, sales promotion manager of Keystone Appliances, Inc., G-E distributor here.

A complete G-E kitchen, designed by Miss Dorothy Shatzer of the kitchen planning department of Keystone Appliances, Inc., is being installed in the store. The kitchen will include a Monitor Top refrigerator, a range, a dishwasher, indirect lighting, cabinets, and planning desk.

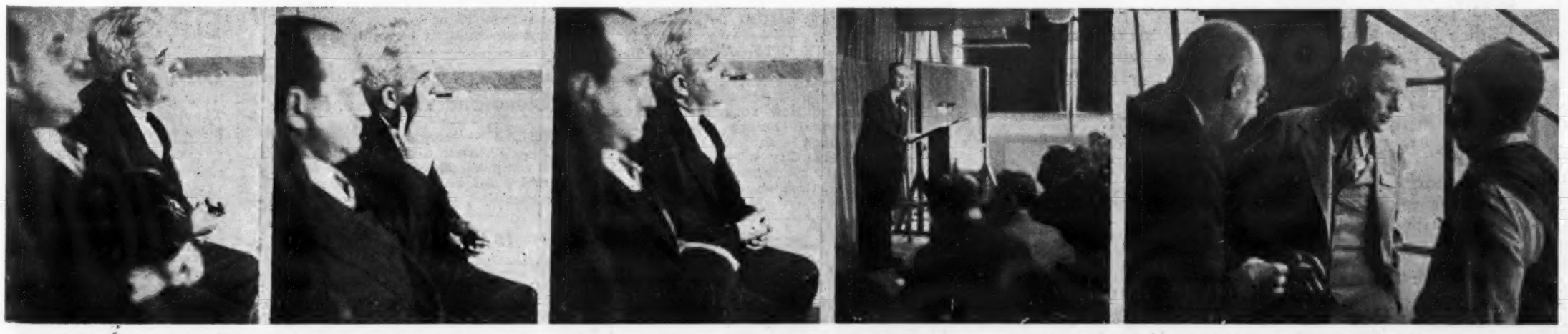
The department store is owned by George F. Stearns, and F. C. Longacre is merchandise manager.

Cook Heads Newly Formed Department for Krich

NEWARK—D. W. Cook, formerly connected with Frigidaire Corp., was recently appointed head of the sales organization division (a new department) of the Krich Distributing Co., Kelvinator distributor in northern New Jersey.

Mr. Cook was with Frigidaire from 1926 to 1934, and served as supervisor, sales manager, commercial manager, and manager of the dealer sales division in New York City and Chicago.

Carrier Personalities Photographed at Dealer Convention in Newark



(1, 2, and 3) White-haired J. I. Lyle, president of Carrier, listens carefully, rubs an eye, and smokes tranquilly while (4) Sales Manager Jack Bickel addresses the gathering and (5) Three dealers looks outside into the gloomy drizzle. Reports of the meeting were published in the Jan. 23 issue and starting on page 15 of this issue.

F. W. Pilsbry, Former York Executive, Dies

PASADENA, Calif.—Frank Wilson Pilsbry, formerly connected with the York Ice Machinery Corp., and a pioneer in the refrigerating machinery field, died recently at his home here.

Mr. Pilsbry was born at Zanesville, Ohio, May 16, 1857. He entered the refrigerating machinery industry in 1886 and during his career in the industry helped establish the "Ice Machines Builders Association of the United States," now the Refrigerating Machinery Manufacturers Association.

For many years, Mr. Pilsbry was treasurer of the F. W. Wolff Co., Chicago. Later he joined the York Manufacturing Co., York, Pa., as general western manager.

In 1907, Mr. Pilsbry, together with his associate, the late Victor H. Becker, Jr., founded the Pilsbry-Becker Engineering & Supply Co., St. Louis, Mo., as the second of the 71 branches that now constitute the York field organization. Similar establishments were formed in Houston, San Francisco, Seattle, Omaha, and Denver. In 1920, these six branches were merged into the York Products Corp., with headquarters in St. Louis.

Mr. Pilsbry was president and chairman of the board of directors of the York Products Corp. until 1927, when all units associated with the York Manufacturing Co. were merged to form the York Ice Machinery Corp.

Until his retirement in 1928, Mr. Pilsbry served as one of the directors of the York Ice Machinery Corp.

His wife, Mrs. Julie H. Pilsbry, and a daughter, Mrs. C. Z. Morgan of Chicago, survive him.

New Minimun Ice Prices Set for New York City

WASHINGTON, D. C.—Revision of the schedules of minimum prices for ice in Manhattan, Bronx, Brooklyn, and Queens boroughs, New York, effective January 22, and extension of the revised schedules until April 22, 1935, was announced recently by the NRA board.

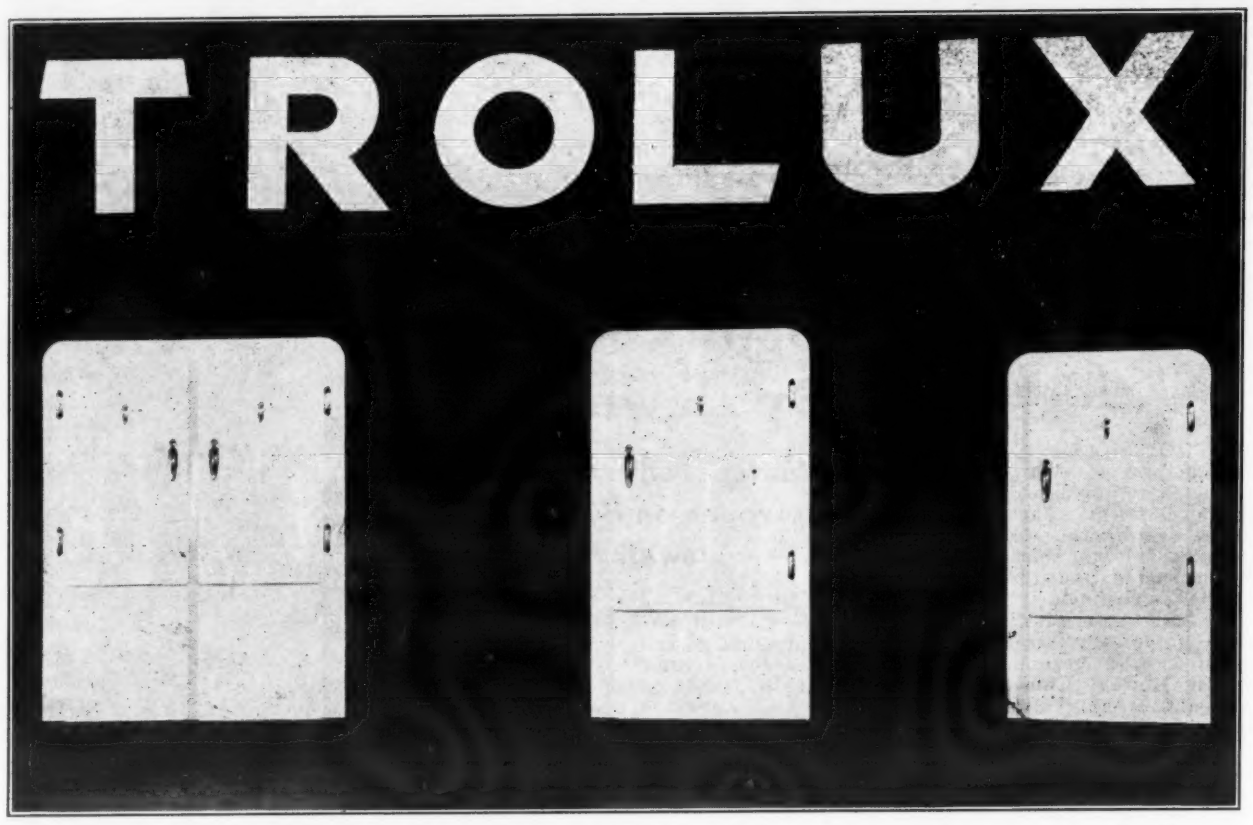
The revision gives a lower minimum price for each item of the schedule, but greatest reductions are in prices to domestic consumers. The schedule lists prices for ice in varying quantities and to three classes of customers, and during the life of the order no sales of ice may be made in the boroughs covered at lower prices.

Class 1 sales are to any industry member for resale. Class 2 sales are to commercial users not for resale. Class 3 sales are to domestic consumers not for resale.

S. H. Pittman Joins Waldron Agency

TERRE HAUTE, Ind.—S. H. Pittman, formerly connected with the advertising and sales promotion department of the Westinghouse Electric & Mfg. Co., merchandise division, is now with the Waldron advertising agency as operating manager and co-partner of H. A. Collins.

1935 Streamlined Electrolux Models



First pictures of the 1935 Electrolux models, with the modern cabinet styling, as they went on exhibition for dealers at the recent pre-view held by Hamburg Brothers, Pittsburgh distributor.

'Freedom of the Shes' Fills House in Kansas City

KANSAS CITY—Moser & Suor, Inc., Norge distributor in this territory, was host to a packed house at a showing of "The Freedom of the Shes," Norge's traveling playlet, in the Uptown theater here Jan. 11. So many persons were turned away that the company is trying to arrange for a return engagement.

No direct advertising was used in the promotion of the show. Every dealer personally invited his prospects and distributed free tickets, with the result that most of those who attended were potential buyers of electric refrigeration this year.

After the show, Norge dealers in the territory were guests of Moser & Suor at the President Hotel for luncheon and an afternoon meeting, at which the 1935 models and new products were presented.

Ice Producer 'Permitted' To Increase Output

BRADFORD, Pa.—The Fresh Water Ice Co. of this city recently received approval from the NRA of its application to increase its plant facilities by 15 tons daily output.

Approval was given because the Fresh Water Ice Co. is the only one of its kind in the vicinity and its capacity was not sufficient to meet last season's need.

Charles Dallas Reach Agency for Carrier

NEWARK—Charles Dallas Reach, Inc., of this city, has been appointed advertising agency for Carrier Engineering Corp., and has gone to work with the Carrier advertising department under Brewster Beach, advertising manager, in the development of sales aids, direct mail, space advertising, and promotion material for the Carrier dealer program.

Richardson and Bauer At Crosley Meetings

CINCINNATI—Howard E. Richardson, assistant to Powel Crosley, Jr., president of Crosley Radio Corp., and Neil Bauer, field sales manager, are now attending dealer meetings being held by Crosley distributors throughout the country.

Mr. Richardson is attending meetings held in the southern states from the Atlantic to Texas, while Mr. Bauer will cover meetings in the northern and New England states, south to Virginia.

The 1935 lines of radios and refrigerators, including Shelvador models with the new rotary compressor, are being exhibited at the meetings.

California Dealers View Atwater Kent Models

LOS ANGELES—Southern California dealers had a preview of the new line of Atwater Kent electric refrigerators and radios last week at the showrooms of Ray Thomas, Inc., distributor for this area. Special invitations were issued to dealers, and President Ray Thomas, and General Manager, A. J. Lindholm presided at three-hour mid-day sessions during the preview.

G-E Orders Increase 29% in 1934

SCHENECTADY—Orders received by the General Electric Co. during the year 1934 amounted to $183,660,303, compared with $142,770,791 for 1933, an increase of 29 per cent, President Gerard Swope announced recently.

Orders for the quarter ended Dec. 31 amounted to $51,046,760, compared with $37,985,790 for the last quarter of 1933, an increase of 34 per cent.

Engineer Tells Profits of Cooling Dress Shops

NEW YORK CITY—A meeting on "Air Conditioning for the Retail Dress Shop and Women's Wear Showrooms," was held recently by the Electrical Association of New York, Inc., at the Grand Central Palace auditorium. Facts and figures showing how shops in New York City have profited by installing air conditioning, were presented by J. Gottlieb, air-conditioning engineer.

Revere Copper and Brass Opens Chicago Office

ST. LOUIS—Revere Copper & Brass, Inc., Chicago, has opened an office in this city at 1511 Telephone building, 1010 Pine St. Edward A. Harbeck is St. Louis district manager for the company.

Westinghouse Gives RCA Stock as Dividend

PITTSBURGH—Board of directors of the Westinghouse Electric & Mfg. Co. has declared a dividend consisting of one-fourth of a share of common stock of Radio Corp. of America for each share of preferred stock and common stock of the Westinghouse company, such dividend to be payable Feb. 18, 1935, to stockholders of record at the close of business on Jan. 21, 1935.

In view of the preferential right of the preferred stock of the Westinghouse company, the board of directors also declared an optional dividend of $3.50 per share upon any share of the Westinghouse company's preferred stock, the holder of which may desire to accept such cash dividend in exchange for the one-fourth of a share of common stock of the radio corporation to be distributed as a dividend upon said share of preferred stock.

Beck & Gregg Host to Crosley Dealers

ATLANTA—Crosley dealers in this area met recently in the Ansley Hotel here to view the 1935 Shelvador electric refrigerators and Crosley radios at the invitation of Beck & Gregg Hardware Co., distributor.

Speakers included W. A. Parker, president of Beck & Gregg Hardware Co.; Herndon Thomas, manager of the refrigeration and radio department of the company; H. E. Richardson, assistant to Powel Crosley, Jr., president of the Crosley Radio Corp., and C. A. Cooper, Crosley district manager.

39 Sales Made Through Kitchen Plan Sketches

NEWARK—Thirty-nine sales, covering 19 refrigerators, 19 ranges, and 15 dishwashers, were made through 139 kitchen plan sketches submitted by the kitchen planning department of Philip Harrison & Co., General Electric distributor, Thomas E. Babson, sales promotion manager, stated recently.

Celander to Engineer Nelson Products

MOLINE, Ill.—P. A. Celander, formerly with Williams Oil-O-Matic Heating Corp., Bloomington, Ill., is now in charge of product engineering for the Herman Nelson Corp. of this city, manufacturer of heating, ventilating, and air-conditioning equipment.

16 Stewart-Warners Sold To Cleveland Apartment

CLEVELAND—George Worthington Co., Stewart-Warner distributor here, recently supplied 16 Stewart-Warner refrigerators for an apartment house in this city.

Maxon to Handle Ward's Export Advertising

NEW YORK CITY—Advertising for the factory export division of Montgomery Ward & Co. is now handled by Maxon, Inc., of this city, according to Frank B. Amos, Maxon account executive.

G-E Opens Regional Meetings this Week

(*Concluded from Page 1, Column 4*)

March 5; St. Paul, March 7; Milwaukee, March 8.

The Southern troupe, starting at Charleston, W. Va., Feb. 4, will visit the following cities:

Richmond, Va., Feb. 5; Charlotte, N. C., Feb. 6; Columbia, S. C., Feb. 8; St. Petersburg, Fla., Feb. 11; Atlanta, Feb. 13; Birmingham, Ala., Feb. 14; Gulfport, Miss., Feb. 15; New Orleans, Feb. 16; Little Rock, Ark., Feb. 15; Memphis, Tenn., Feb. 19; Knoxville, Tenn., Feb. 21; Louisville, Feb. 22; Cincinnati, Feb. 25; Columbus, Ohio, Feb. 26; Ft. Wayne, Ind., Feb. 28.

The Eastern troupe will visit Wheeling, W. Va., Feb. 11; Pittsburgh, Feb. 12; Detroit, Feb. 14; Cleveland, Feb. 15; Harrisburg, Pa., Feb. 18; Baltimore, Feb. 19; Washington, D. C., Feb. 20; Philadelphia, Feb. 21; Newark, Feb. 25; New York City, Feb. 26; Waterbury, Conn., Feb. 27; Boston, Feb. 28 (joint meeting with Springfield and Providence); Schenectady, March 4; Syracuse, N. Y., March 5; Buffalo, March 7; Chicago, March 8.

Consumers Will Expect Low-Cost Appliances

NEW YORK CITY — Consumers will expect low-priced electrical appliances, easy terms, and low financing costs as a result of the programs of the Tennessee Valley Authority and the Electric Home & Farm Authority, believe editors and investigators of *McCall's* magazine, who recently visited the TVA area, interviewing Federal officials, utility executives, dealers, and home-makers.

Other conclusions drawn by the editors from investigation of the TVA region are as follows:

"Not only in the Tennessee valley but elsewhere, the speed at which the cost of residential electricity is decreasing will be accelerated.

"The Government is spending vast amounts of money in the Tennessee Valley. Much of these expenditures is going for wages and salaries. Hence, the purchasing power of the valley's inhabitants is rapidly increasing. This condition creates a market, not only for electricty and electrical merchandise, but also for all types of consumer goods.

"It is inescapable that we face an era of greater interest in household electrical appliances than ever before. . . . As one appliance manufacturer expressed this condition to a *McCall's* editor: 'The TVA is the grandest piece of promotion that has ever broken for the electrical industry. Imagine the President of the United States standing up and saying that every home in America ought to be completely electrified.'"

As a result of localized educational and promotional work, employing merchandising methods that have been found successful in the industry, appliance sales in Tupelo between May 1 and Sept. 15 amounted to $65,838.98, the investigators found.

"When it is recalled that Tupelo has about 1,000 wired homes, this volume of appliance sales is equivalent to about $65 per wired home, which is a national record," state the editors.

Roskin Shows F-M Line To New Englanders

BOSTON—Roskin Distributors, Inc., was host to dealers in the Boston area at the first showing of the new Fairbanks-Morse Conservador electric refrigerator in the Silver Room of Hotel Kenmore here, Jan. 23 and 24.

Ottenheimer Bros. Enlarge Baltimore Plant

BALTIMORE—Ottenheimer Bros., Inc., manufacturer of Oreole refrigeration equipment, recently enlarged its plant to include general offices. The manufacturing plant and offices are now located at 1001-1045 North Montford Ave.

Copeland
DEPENDABLE *ELECTRIC* REFRIGERATION

Years of Experience

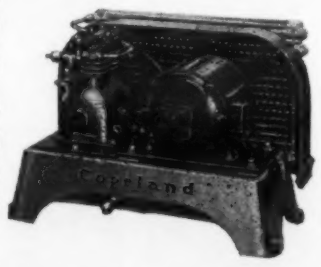
Since the early days of 1918, when Automatic Refrigeration was in its infancy, the name Copeland has been synonymous with Efficiency, Dependability, Economy.

In 1935 the name means more. It still connotes the three major virtues and in addition the precious attribute of Public Acceptance, plus Corporate Stability.

In both Commercial and Domestic divisions of the refrigeration business Copeland provides everything the buyer of refrigeration needs, Reliability—Style—Simplicity—Beauty.

With a corporation policy based on Maximum Values, Copeland Refrigeration Corporation has linked its selling efforts to those of dependable distributors, in whose welfare it is naturally deeply interested. There are no "Factory Branches" in Copeland's set-up.

Distributors who desire to make adequate profit in the business are cordially invited to join with this corporation whose interests are identical with theirs.



COPELAND REFRIGERATION CORP., Detroit, Mich.
Main Office and Factory—Holden at Lincoln Ave.
Division of DALLAS E. WINSLOW, Inc.

DRESS UP
your Display Cabinets . . .

★ The glossy black Ace Hard Rubber Door Frames, Rails, Jambs, etc., offer an attractive contrast to solid white porcelain bodies and because of the sanitary nature of Ace Hard Rubber, and its other advantages, dealers everywhere prefer to install cabinets built with our equipment.

★ *CATALOGUE FREE to manufacturers on request*

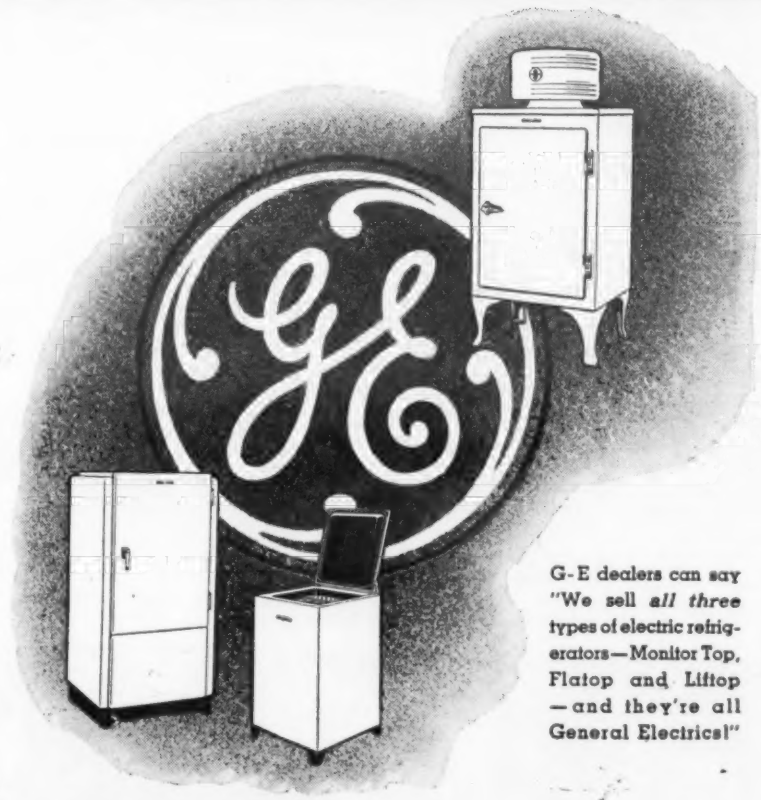
AMERICAN HARD RUBBER COMPANY
11 Mercer Street, New York, N. Y.
Akron, Ohio • 111 West Washington St., Chicago, Ill.

Every G-E user is a G-E salesman

THE unfailing year after year *performance* of the General Electric refrigerator has amazed owners everywhere—over 1,500,000 satisfied General Electric users now enthusiastically recommend their refrigerators to friends.

"How long will it last?" is the question being asked by today's buyers of electric refrigerators. Today it is the *performance* of the refrigerator that interests the buyer. The dealer who can *prove* the performance record of the refrigerator he handles is the one who will get the business and show the greatest net profit.

The General Electric refrigerator's record for dependable year after year performance has never been equalled by any other refrigerator. It is THE outstanding feature in refrigeration. The successful General Electric dealer will tell you this matchless performance is his greatest asset. It eliminates costly service problems. It makes salesmen out of his customers. It means more profit—safer profit—profit that sticks. General Electric Company, Specialty Appliance Sales Department, Section DF13, Cleveland, Ohio.



G-E dealers can say "We sell *all three* types of electric refrigerators—Monitor Top, Flatop and Liftop—and they're all General Electrics!"

GENERAL ELECTRIC

ALL-STEEL REFRIGERATORS

PERSONALITIES

By George F. Taubeneck

1934 in Review

This is the third instalment of a short history of the electric refrigeration industry during the year 1934. First instalment was published in the Jan. 16 issue, and the second in the Jan. 23 issue.

Pitching right into the story without a wind-up, this instalment begins where the other left off.

Commercial Refrigeration

The commercial refrigeration industry experienced no such buying rush as did the household refrigeration division in the early months of 1934. In general, the industry seemed pretty well gripped in the doldrums which had been with it throughout the depression.

Only two segments of the commercial market to hold steadfastly good were the baking industry and the dairy business. Of these, the dairy business was the more important. As a result, much of the equipment introduced during the year had to do with milk cooling, butter making, the transportation of dairy products to market, and the manufacture of ice cream.

Kelvinator Corp, in March brought out a line of commercial units, including a 20 hp. compressor, several new condensing units, a complete line of continuous fin evaporators, and two new high-capacity forced-convection cooling units. Brunner Mfg. Co. extended its line with 2 hp. and 3 hp. water-cooled condensing units for large commercial and air-conditioning use.

York Ice Machinery Corp. announced the development of four small Freon refrigerating units in sizes from ¼ to ¾ hp. Later the company increased its line with two more new Freon units consisting of a 3-hp. triple-cylinder and a 7½-hp. double-cylinder Balanseal compressor.

Servel brought out a line of commercial condensing units sized from 5 hp. to 10 hp. and designed for air conditioning and larger commercial installation.

Westinghouse supplemented its commercial line with four new compressors in 1 and 1½-hp. sizes, both air and water cooled, in the two-cylinder conventional type. Later the company began the marketing of 2 and 3-hp. condensing units of the open type and using Freon. The units were hooded, and provided an air channel over the compressor or through the condenser to remove all heat generated.

Thermal Units Mfg. Co. introduced a novel type of compressor, with the cylinders bored in cylindrical blocks of cast steel, with four cylinders in each of two blocks, and resembling in general appearance the cartridge chamber of a revolver. Four models were available with 1 to 3-hp. motors.

Yates-American Machine Co., Beloit, Wis., entered the field with a new line of condensers, evaporators, and fin coils. Lipman brought out a series of condensing units in 3, 5, 7½ and 10-hp. sizes for methyl chloride or Freon refrigerants.

Stewart-Warner gave its refrigeration distributors a preview of its new heavy-duty single-cylinder compressor, including all features of its twin-cylinder unit, and with no major changes in mechanism or design.

Westinghouse early in the year introduced a beverage cooler, on which it later changed the design to include hermetically-sealed refrigerating units. Used in the dispensing of Coca-Cola, the application marked the entry of hermetic equipment into a new field.

Kelvinator in May added a new water cooler to its commercial output, and shortly afterward brought out three new ice-makers adaptable for separate installation or for use with Kelvinator vertical-type cooling units.

To replace its original "Kool-Rite" bottle cooler introduced the previous year, Crosley introduced a new Kool-Rite" selling for $117.50 f. o. b. Cincinnati.

Milk coolers were a prominent feature of the Dairy Industries Exposition in Cleveland in October. Frigidaire's new "Flowing Cold" model, and others by Frick Co., York Ice Machinery Co., and Driice Appliances, Inc., Mt. Vernon, Ill., were shown.

Ralph V. Grayson, consulting engineer of Atlanta, Ga., in November announced the development of domestic and commercial refrigerators and beer coolers using solid carbon dioxide as the refrigerant. Liquid Carbonic Corp., Chicago, a short time later developed a Liquid-Zahm beer-cooler, mechanically refrigerated, with a Frigidaire compressor specially designed for special use with the beer-dispensing system.

In the field of display cases, McCray introduced two models, one double-duty and the other for the top display, in 10 and 12-ft. lengths, as well as a floral display case. Later the company introduced a delicatessen display case, of 6-ft. two-shelve size, with bottom storage compartment for bottled goods or reserve storage.

Seeger's 1934 line was equipped with coils of the company's own design, and was intended for use with mechanical refrigeraiton.

The C. V. Hill & Co. 4100 case, for use with electric refrigeration, had one coil behind the case and another on top. A later model by the same company was a wall-model dairy refrigerator, built in half-display and half-storage design.

A double-duty unit announced by Holcombe and Hoke Mfg. Co. was featured by a service load retarder between the top display shelf and bottom compartment.

A new type of self-contained, self-service refrigerator for retail food stores was installed in five San Francisco markets operated by Purity Stores, Inc. General Electric equipment was used. The top section was designed for the unobstructed display of butter, cheese, bacon, etc., with open spaces for self-service. Single plate glass was used. Due to the design, the air spillage through the open spaces was said to be very slight.

In the field of truck refrigeration, developments during 1934 were interesting. Louis Allis Co., Milwaukee, introduced a power take-off for trucks, adapting its "Dynamatic" drive, which had been used to power air-conditioning systems on railroad trains.

A new McCord Petrogas system, built by McCord Radiator & Mfg. Co. and using Petrogas, a hydrocarbon distillate similar to Propane, was put into use in October. One of the first trucks equipped with the system was owned by S. Lowenstein & Son, Detroit packers. Kold-Hold Mfg. Co., Lansing, Mich., developed a forced-convection cooling system for refrigerated trucks requiring temperatures within the range of 35° to 60° F.

Kelvinator's contribution to truck refrigeration included four light-weight condensing units designed especially for truck use and available in sizes of from ½ to 1½ hp.

General Electric's refrigerated truck line embodied a series of new features, including a specially designed power take-off drive with over-running clutch embodied in the driving pulley, a frosting of the suction line, and a coil-free interior compartment.

Among the commercial equipment on display at the Dairies Industries Exposition in Cleveland during October was a considerable number of ice cream cabinets. Kelvinator, Emery Thompson Machine & Supply Co., Grand Rapids Cabinet Co., makers of "ZerOviZ" products, C. Nelson Mfg. Co., American Radiator Co., Driice Appliances, Inc., Creamery Package Co., and Anheuser-Busch, Inc., were represented at the exposition.

Refrigeration representatives present at the exposition found one major trend and one future possibility:

(1) The trend toward the consumption of evaporated milk, which should increase the need for refrigeration in transport or in the dealer's store as well as added need for home refrigeration to preserve the milk after cans are opened; (2) The future possibility of Vitamin D ice cream, making the sale of that product an all-year-'round business and stimulating the market for electrically refrigerated ice cream cabinets and soda fountains.

Two new ice cream cabinets using solid carbon dioxide were introduced at the exposition by the American Radiator Co. and Driice Appliances, Inc., of Mt. Vernon, Ill. Both employed a secondary refrigerant to transfer refrigeration from the dry ice to the ice cream compartments. A number of the other models had changed from round to square compartments, with hinged lids, providing increased storage capacity for both square-packaged and bulk ice cream.

Early in November, the Commercial Refrigerator Mfg. Co. of Los Angeles marketed an ice cream machine which it was claimed would produce individual dishes in 40 seconds and which would also produce fruit sherbets, malted milks, and frosted beverages in a few minutes. It was known as the Insta-Freeze and sold for $595. Material in liquid form is poured into a hopper at the top of the machine, whence it is delivered into an atomizer and sprayed on a cylinder wall kept at sub-zero temperatures. The spray freezes instantly and is later scraped from the walls of the cylinder and moulded.

Humidity control appliances were introduced by Minneapolis-Honeywell Regulator Co., with a compensated humidity control system designed to govern humidity at any desired differential between inside humidity and outside temperature, and intended for use with heating systems; by American Air Purifier Corp. with a portable humidifier utilizing no mist or spray, and consisting of a wheel of thin metal vanes in a cylindrical casing and resting in a pan of water; and by Russell Electric Co., Chicago, with a new Hold-Heet room humidistat and a new solenoid valve.

For treating the aluminum alloy rivets used in the manufacturing of aircraft, Jewett Refrigerator Co. built a number of special top-opening, portable, low-temperature electric refrigerators.

* * *

Department Stores

Department stores have become increasingly important to the refrigeration industry. Last year they began to observe that refrigerators were becoming increasingly important to them.

As a consequence, 1934 saw the department stores abandon, for the most part, their emphasis on buying, and instead put the emphasis on selling. The result was their recognition as a major merchandising force in the refrigeration industry.

That is, where formerly these organizations bought refrigerators in job lots and at special discounts, and then tried to move them quickly in a special sale, they now began using specialty selling methods in their merchandising, stressing what electric refrigerators would do and not making price their principal point.

It was, in other words, a new selling approach for department stores.

Naturally, then, they ceased to be regarded with fear by others in the industry. Instead of being the *upsetter* of electric refrigeration merchandising technique, the department store became the *pace-setter.*

From the moving of cut-price "jillopy" refrigerators by catch-as-catch-can methods, department stores progressed to the setting up of special refrigeration divisions, with expert supervisors, trained salesmen, and definite promotion programs of highly constructive nature.

When department store executives met in their second annual Merchandising Clinic at Nela Park, Cleveland, on May 31, chief topic of debate was: Can a department store appliance salesman sell more than one line successfully? And, though there was no official answer, concensus of argument and facts seemed to be negative.

Other topics treated at the clinic included the worth of private brands as opposed to nationally advertised brands, number of lines to be carried in stock, number of samples or tryouts to be shown in stock, minimum mark-up on price leaders, effective control of markdowns, regulation of trade-in allowance, and percentage of stock to be carried in the prestige or upper price brackets.

One reason department stores did so well was that manufacturers were willing to show them how.

The principles of specialty selling are basically opposed to fundamental department store merchandising theory, and at first their introduction was bitterly opposed. Finally, however, most department stores came to specialty selling as the only logical answer to the problem of moving electrical appliances in profitable volume.

The importance of department stores in electric refrigeration merchandising, far from being on the wane, will continue to increase for some years to come, is the opinion of V. J. McIntyre, manager of Kelvinator Corp.'s department store division, as given to Electric Refrigeration News readers.

"The reason for that is clear," declares Mr. McIntyre. "When any product reaches a certain stage of public acceptance and saturation, it adapts itself readily to over-the-counter merchandising, and the department store becomes one of the most logical and important outlets for the product."

But, he points out, refrigeration has not yet moved into the over-the-counter class. Buyers as yet do not flock to department stores in such numbers that the average refrigeration department can do a profitable business simply by putting some stock on the floor and advertising that it's there.

Department stores which do good volume business each year have to pull hard for it—have to find ways of pulling buyers to the department, and of closing sales that might go somewhere else without special attention.

The two ways in which a department store can do a job of refrigeration selling, Mr. McIntyre believes, are by the use of straight merchandising, where advertising and floor traffic were depended on for business, and by a combination of merchandising and specialty selling methods.

Stores using the latter plan, he added, usually showed the largest volume of sales.

Type of salesmen chosen, their training, and the supervision given them all have their bearing on sales results obtained, Mr. McIntyre observes.

He also notes a decline in the handling of special and off-brand units. Stores are learning, that price alone would not sell such goods. Ralph C. Cameron, manager, told the News that it had been found that the department store merchandising results in larger unit sales, due to better-trained salesmen, and that it had aided the distributor in creating considerable "plus" business, estimated to be as much as 9 per cent in cases.

"The department store resale operation, instead of taking business away from the small dealer, really helps him," insists Mr. Cameron, "since the smart merchandising tactics practiced by department stores tend to make people more electrical appliance conscious—with the result that sales climb to the benefit of all retail outlets."

There was a tendency to reduce the number of lines of refrigerators carried in 1934, since the stores experienced better sales results by concentrating on a few well-known makes.

Early in the year, President Powel Crosley, Jr., of the Crosley Radio Corp., advised his distributors to conduct a resale operation through department stores, even if that operation were conducted at a loss.

Not only would such action add prestige to the Crosley name in the minds of prospects, he pointed out, but it would also make the problem of signing up dealers in the outlying sections of that territory much easier.

Distributors who tried out his suggestion found both predictions true.

Despite longer margins demanded by department stores, distributors found it profitable to deal with them, and discovered likewise that their resale operation made money, chiefly because it was "plus business," added volume but not bought with increased overhead.

Distributors who at first claimed that department stores would cut into their own retail operations found, in most cases, that they were crying before they were hurt.

Floor traffic, it was found, accounted for most of the department stores' sales, and a relatively small percentage of this floor traffic was found registered on other dealers' prospect lists.

A disturbing element in time payment sales, in which department stores often carry at lower interest rates than the distributor could afford, have been largely cleared up through local code authorities, or through the adjustment of f.o.b. prices to enable the distributor to subsidize the cost of financing his own retail operations.

With manufacturers and distributors both happier as a result of changes in department store merchandising methods during 1933, the place of these large outlets in the field seems more secure than ever before.

(*More 1934 Review in Next Issue*)

* * *

Range Mfrs. Pls. Note:

Every once in awhile some neophyte comes along and makes us really ashamed of ourselves by finding something which has been lying undiscovered under our noses all this while.

Today a new stenographer, Lois Hoogstra, came in with a sheaf of letters to sign. While we were laboriously scratching our unintelligible John Hancocks, the new steno discovered this gem in one of our library volumes—a collection of extracts from the *New Yorker* Magazine:

"Plaintiff alleges that this defendant represented to her that this range would not become heated on the upper surface of the oven. That plaintiff, relying wholly on this defendant's representations, placed her bath tub in the kitchen near the range. That, upon emerging from the tub, plaintiff's foot accidentally came into contact with the soap on the floor and she was thus compelled to sit upon the range. That, although she arose therefrom in all diligence, she discovered she had been branded H-47.—From a petition in a damage suit."

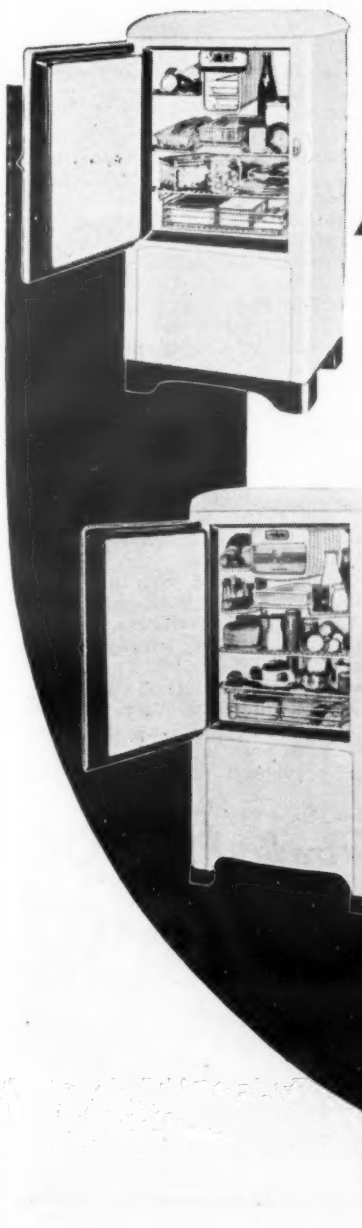
Engineers Give Farewell Party for Jack Schaefer

When Jack Schaefer, formerly engineering editor of the News, left Detroit to take a new job, friends in the refrigeration engineering profession gave him a farewell party. Above you see (1) M. C. Terry, Kelvinator engineer, and John Wyllie of Temprite getting together for a little impromptu harmony, (2) "Taubenoff and his violin" join the ensemble. (3) Mr. Wyllie again, and the guest of honor himself, Mr. Schaefer.

Seen at the Detroit refrigeration engineers' farewell party for Jack Schaefer, former engineering editor of the News: (1) M. C. Terry of Kelvinator plays a mean accordion. (2) Phil Redeker of the News and Dan Wile of Detroit Lubricator study the open stud cards which have fallen to (3) John Wyllie of Temprite and Frank West, inventor of the Shelvador. (4 and 5) Jack Schaefer and Bill Higham of Universal Cooler. (6) Mr. and Mrs. Terry listen to an after-dinner story.

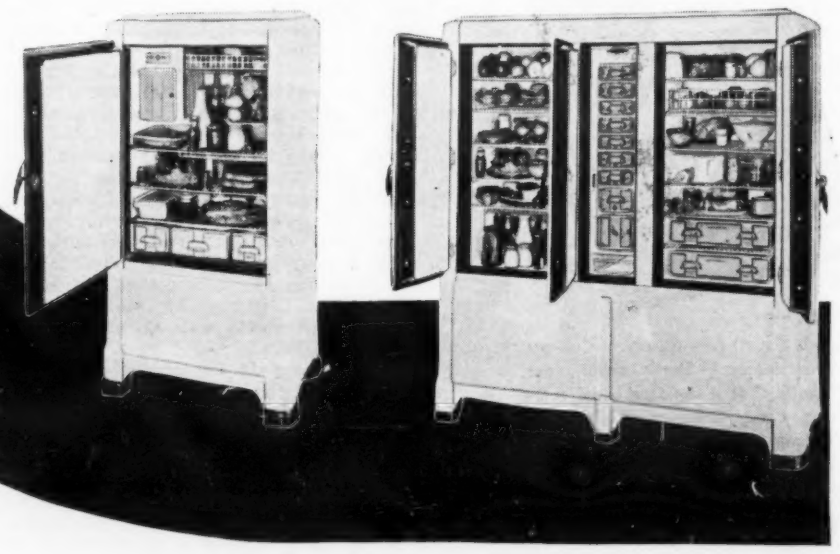
from the *Colonel's Lady*

TO MRS. O'GRADY



Kelvinator COVERS REFRIGERATION PROSPECTS 100%

No matter where your prospects come from, some one of Kelvinator's 19 models will exactly meet the need and fit the budget. Careful study of the market, in an experience covering more than 20 years, has enabled Kelvinator to accurately gauge consumer needs and to build a line which will permit of the most complete merchandising to the entire market.



Any dealer or merchandise manager will be quick to recognize in Kelvinator the maximum selling help that can be packed into a product. Famous Kelvinator features, known Kelvinator quality, proved freedom from service trouble, ultra-modern refinement of line and finish —all help to cut sales resistance to the minimum. And, of course, Kelvinator has prepared complete sales promotion plans for every type of retail outlet, including the exclusive Kelvinator METER-ATOR Plan which has been proved the most effective prospect-closing device in the refrigeration industry.

For a bigger and better refrigeration business in 1935 inquire now about a Kelvinator franchise. . . . KELVINATOR CORPORATION, *14250 Plymouth Road, Detroit, Michigan. Factories also in London, Ontario, and London, England.*

(1032)

Kelvinator

Lutes Listens to Vining & Cameron Address Department Store Conference.

(1) Chairman Herschel Lutes, division merchandise manager of the J. L. Hudson Co., Detroit, listens to one of the electrical sessions of the recent National Retail Dry Goods Association convention in New York City. (2 and 3) V. E. "Sam" Vining, manager of department store sales for Westinghouse, addresses the N.R.D.G.A. (4) So does Ralph Cameron, G-E assistant sales manager. (5) So does a visitor to the Westinghouse exhibit at the N.R.D.G.A. convention.

Central Hudson Sets '35 Quota at 6,000

POUGHKEEPSIE, N. Y.—Central Hudson Gas & Electric Co., operating on its dealer cooperative plan, has announced a quota of 6,000 electric refrigerators for 1935, an increase of 33 per cent over sales for last year.

The company this year will also pay its salesmen a small commission for each refrigerator sold by dealers in their territory. The force of salesmen who work with dealers has also been increased.

Central Hudson's electric range quota for 1935 is 2,200, more than double the sales for last year. The trial plan, in effect last year, will be continued. District representatives in rural areas will concentrate almost entirely on electric ranges.

Harrisburg, Ill. Distributor Holds Dealer Meeting

HARRISBURG, Ill. — Howard Souther, Crosley district manager, introduced the new models in Shelvador electric refrigerators and radios to 70 dealers of the Standard Electric Corp., distributor of Crosley products.

Standard Electric Corp.'s sales promotion and finance plans were explained to the dealers, and two advertising men were also present to outline methods of increasing business through the use of direct mail.

Crosley Export Factor Describes Market In France

CINCINNATI—A graphic picture of radio and electric refrigeration in France and Belgium was given by Ralph de Castro, proprietor of La Representation Generale in Paris and Brussels, when he attended the Crosley distributors meeting here early this month. Mr. de Castro is export factor for Crosley radios and refrigerators in France, Belgium, French Indo-China, and some parts of Central Africa.

France imposes a duty of 19 cents a pound net weight on refrigerators, Mr. de Castro said, in addition to a six per cent ad valorem import tax. An electric refrigerator selling in the United States for around $100 would cost almost $300 in France and French Indo-China, he explained.

Crosley refrigerators, Mr. de Castro said, are now selling among the top three of 10 or 12 American makes sold there. Few refrigerators are made in Europe, and although their price is higher, their quality does not approach American standards, he added.

Some French-made radios may approach American products in quality, Mr. de Castro said, but their price is much higher. Average price of a five-tube set selling in this country for $20 is in the neighborhood of $70 in France, he stated.

Liftops Installed in Newark Apartment

NEWARK—C. B. Judge, apartment house division manager for Philip H. Harrison & Co., Newark General Electric distributor, has installed 198 G-E refrigerators in apartment house buildings in recent months. Fifty-seven of the number were Liftop models, and the others of Monitor Top, and Flatop design.

In installing Liftop models, Mr. Judge said, it was necessary to instruct tenants in their use, by selling them on the idea of marketing every other day, and showing them how to systematically pack the box.

Six of the buildings were owned by insurance companies. The Earle Apartment hotel, managed by Joseph J. Harris, was also completely equipped with 39 model SD-35's and F-3's, and 21 Liftops were purchased by him for installation in a building at 425 Hudson Ave., West New York.

The Prudential Insurance Co. installed 36 Liftops in three of their low-rental buildings in West New York, replaced 50 machines connected to a central plant in an apartment building in Jersey City, and 24 operated by a multiple system in a Union City building. Twenty-eight machines were also installed by the Metropolitan Insurance Co., in one of its Newark apartment buildings.

The Harrison company also installed 66 G-E's in the Englecliff apartments, Hohokus, N. J.

Department Store Finds Periodic Shows Create Customer Interest in Appliances

By T. T. Quinn

DETROIT—If an early start and customer interest are any indications at all, 1935 is going to be another record-breaking electrical appliance year for J. L. Hudson Co., Detroit's largest department store.

Hudson's third Housewares Exposition, which opened Jan. 7 and closes Jan. 31, is bringing droves of Detroit housewives to the company's tenth floor salesrooms, and is very effectively converting an ordinary lull period into one of intense activity.

What's the Exposition itself like? Well:

You enter the store, ask to see the Housewares Exposition. Presto! Special express elevators zip you up to the tenth floor (first time, by the way, that the affair has rated this disinction) and you alight, expecting to look around for the show.

Merchandise Grabs You

Look around? You needn't. The merchandise jumps right out and grabs you. There's about as much chance of your being there two minutes and not finding something of interest as there is of your traveling to Europe and missing the ocean.

Some of the devices designed to waylay the aimless onlooker include a canary circus (rope walkers and all), Westinghouse's "Painting of Light" display, an historical exhibit of the evolution of lighting in the home, light bulbs arranged in a grape-like cluster, and one as tiny as a grain of wheat, an aluminum "cow" that makes cream by putting milk and butter together again, a replica of Edison's first talking machine, chinaware and fancy dinner pieces, ceramics and glassware from Sweden, General Electric's "House of Magic," steps in the manufacture of oilcloth, and electric irons, and household brushes, and stoves, and pottery, sleight-of-hand performers, and glass blowers, and glass cutters—and dozens of others you'd notice after awhile.

The electric refrigerators are all massed over in one section of the floor, set out in neat little alcoves, and a number of them raised above the general floor level.

Six makes were on show: General Electric, Frigidaire, Grunow, Norge, Kelvinator, and Westinghouse. Seventh, carrying Hudson's own brand name, was not displayed, since it has not yet received its 1935 supply.

Special Units Displayed

In that section, too, were displayed the "wonder" G-E, that opened when you waved your hand in front of the door, and glassed-in mechanism of the refrigerator that gives a view of the operating process of the Monitor Top, the "Talking Kitchen," of World's Fair fame; Norge's "largest rollator in the world," and an Aerolator room cooler, stripped down to show how it worked; the Kelvinator condensing unit, enclosed in glass; and the crystal-finished "sparkling" Frigidaire, catching the eye as it revolved slowly on a pedestal.

Nearby were two General Electric Kitchens, and a few steps farther on were Hudson's three model kitchens and breakfast nook, the first fitted with an Electrolux to demonstrate gas refrigeration, the second with a Norge as the eye-catcher, and the third holding an ice box. No attendants were here, and visitors had ample time to see, discuss, and choose.

Big factor in swelling attendance at the exposition is the Home Service Advisory Bureau, under the direction of Mrs. Jessica Meek, former home economist with Detroit Edison Co. The bureau is having a special program during the exposition, with daily afternoon lectures by noted home economists, chefs, and experts in home management.

Miss Verna Miller, director of home economics for Frigidaire, explained "Foods, Facts, and Fancies" during the first four days of the exhibition. Then came Miss Edwina Nolan, director of General Electric's Kitchen Institute, with four days of her "Modern Kitchen Magic," and a lecture on correct lighting by Mrs. Mariquita Dygert, lighting consultant of the Detroit Edison Co.

The week of Jan. 21 opened with George Rector, famed chef and restaurateur now with the A. & P. Tea Co., as conductor of the kitchen. In his wake, Miss Phyllis Harris, home economist with Kelvinator, Miss Betty Appel of Norge, and Mrs. Bessie Wright of Simple Simon Co., manufacturers of pastry crust flour, were scheduled as speakers.

Mrs. Meek explained that, while the January program is in the nature of a special event, the department conducts an all-year recipe service, aids in meal planning, gives suggestions for parties, and hints on correct tableware, and encourages the use of its quarters for bridge parties, luncheons, and the like.

Although the bureau was organized as such only in September, its work has tripled, and Mrs. Meek now has four assistants to help her in handling the everyday problems of Detroit housewives.

So much for the work of the Home Service Bureau in bringing potential buyers to Hudson's tenth floor department. Now, what about results?

Best Type of Promotion

L. F. Johnson, assistant manager of the department, says he believes the exposition sells refrigerators better than almost any other form of advertising.

"Right now," he says, "sales are not so important as getting potential buyers to think about what they will want within the next few weeks. We've getting into action earlier this year than last, and our prospects appear better than ever before. I consider them definitely better than in 1934.

"When a lot of household appliances are on display, the visitor will undoubtedly find something which interests her. This brings her back, and then we try to interest her in something additional, something like a refrigerator or a washing machine.

"Located as we are on the tenth floor, something extra in the way of promotion is necessary to bring potential buyers in to see us."

Full promotional plans for 1935 are still incomplete, but the department will hold its two regular refrigeration shows, beginning in March with a full display of all models it carries.

In addition, the department conducts its own sales drives, as well as participating in all the store-wide sales. During the selling season spot displays, unattended, are placed at various points on the main floor.

Ten Hudson salesmen sell refrigerators and washers, and 16 more are employed in the General Electric resale operation, six of them in the basement display section. The store's men spend two-thirds of their time on the floor and one-third in outside selling, while the G-E men reverse the procedure and spend most of their time out of the store.

"We employ trained men only," said Mr. Johnson, "men whose past record qualifies them as producers, and we give them a lot of leeway in accomplishing their results. There is no systematic selling method used, and no intensive follow-up. We rely on our trained salesmen to close the deals, and let them use their own judgment as to the amount of time that will require."

The RIGHT MOTOR for AIR CONDITIONING

For every unit in any Air Conditioning System—Refrigerator Compressors, Fans, Blowers, Pumps—there's a Century Motor exactly suited to meet ALL the requirements of the job, as proved in hundreds of thousands of installations in all parts of the world ... Consult Century Engineers ... You are assured of sound recommendations, backed by more than 31 years of knowing how to build motors that "Keep a-Running"—even under severe operating conditions in unfavorable surroundings... Sizes up to 600 H. P.

CENTURY ELECTRIC COMPANY
1806 Pine Street St. Louis, Mo.
Offices and Stock Points in Principal Cities

Get This

MULTISPEED SQUIRREL CAGE MOTORS

The speed change requirements of Air Conditioning Equipment are most economically met with Century Multispeed Motors. 2, 3, or 4 speeds—Automatic, push button or manual control...1/8 to 200 Horse Power.

Just Out—
Bulletin 6-1, page 1 tells all about Century Splash Proof Motors — Shows scientific design of "baffles" that keep out water coming from any angle. Illustrates Slip Ring, Flange Mounting and Two-way Ventilation Splash Proof Motors.

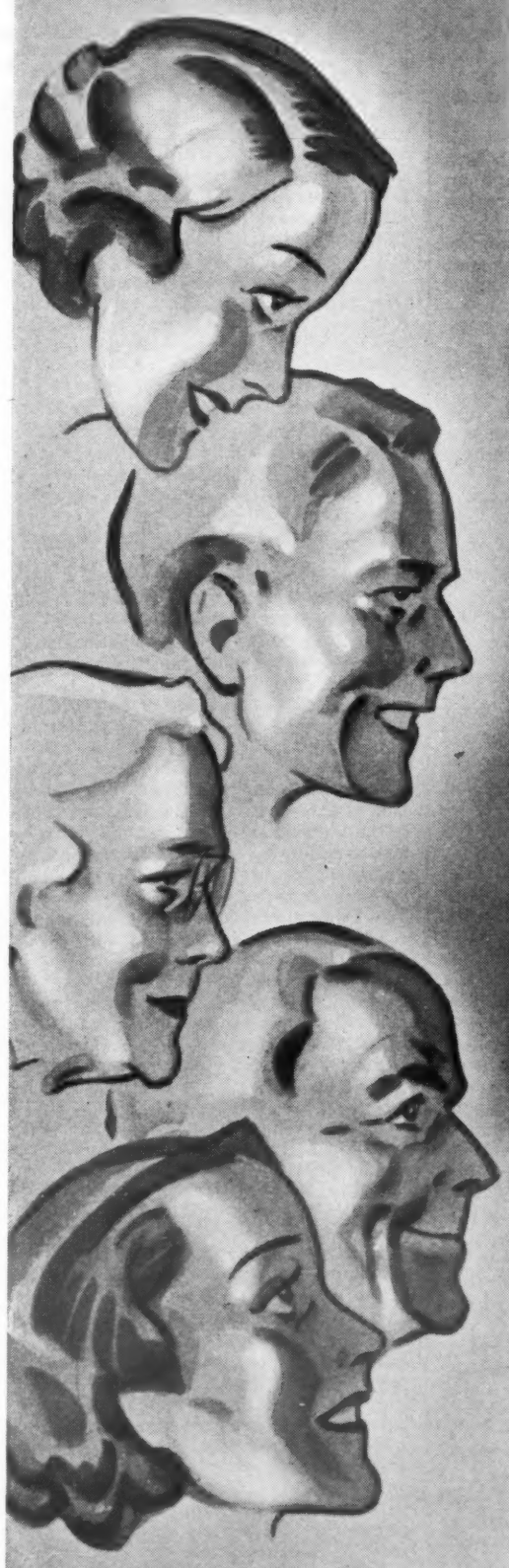
Century 1/250 to 600 H. P. MOTORS

Extra Dry ESOTOO
LIQUID SULPHUR DIOXIDE
V-METH-L
METHYL CHLORIDE

WEST NORFOLK, VA.
131 State St., Boston, and
76 Beaver St., New York

COMING!

THE NEW **REFRIGERATOR FOR THE** *Streamline Age*



EVERY HOUSE NEEDS • WESTINGHOUSE • WESTINGHOUSE ELECTRIC

All Eyes on Westinghouse. Watch for Announcement • • Most Spectacular development in refrigeration history!

Westinghouse

Streamline **REFRIGERATORS**

ELECTRIC REFRIGERATION NEWS
Registered U. S. Patent Office
Copyright, 1935, by Business News Publishing Co.
Published Every Week by
BUSINESS NEWS PUBLISHING CO.
5229 Cass Ave., Detroit, Mich. Telephone Columbia 4242.
Production Dept., 550 Maccabees Bldg., Columbia 4245.

Subscription Rates—U. S. and Possessions and all countries in the Pan-American Postal Union: $3.00 per year; 2 years for $5.00. Canada: $6.00 per year (due to special tariff). All Other Countries: $5.00 per year (U. S. Money) (See "Buyers Guide" columns for combination rates with the 1935 REFRIGERATION DIRECTORY AND MARKET DATA BOOK.)

F. M. COCKRELL, *Publisher*

GEORGE F. TAUBENECK, *Editor*
PHIL B. REDEKER, *Managing Editor*
A. J. CUTTING, *Statistical Editor*
FRANCES MCNAMARA, *Assistant Editor*
THEODORE T. QUINN, *Staff Writer*

GEORGE N. CONGDON, *Business Manager*
JOHN R. ADAMS, *Production Manager*
JEAN H. ADAMS, *Subscription Manager*
HELEN K. GILMORE, *Assistant Adv. Mgr.*

Member, Audit Bureau of Circulations
Member, Associated Business Papers
Member, Periodical Publishers Institute

VOL. 14, NO. 5, SERIAL NO. 306, JANUARY 30, 1935

A Sales Manual for Air Conditioning

SELLING air conditioning is a brand new business. It's something about which little is known yet; and even that little which has been learned hasn't been told. No books have been written on it. Nobody has set himself up as an authority. Even factory officials do not go around giving how-to-do-it speeches.

One of the chief reasons for this state of affairs, of course, is that thus far the air-conditioning industry has been living in a state of promise. It is betting on futures, and drawing little subsistance from the present. The public seems ready for it—clamoring for it, in fact—and few young industries have had the benefit of so much free publicity.

But so far the young air-conditioning industry has not learned how to sell its wares. Total annual sales up until 1933 were negligible; and even last year, encouraged by better general business conditions and backed by the first strong promotional programs, air conditioning did a drop-in-the-bucket business — when compared with other branches of the refrigeration industry.

A Few Dealers Made a Profit

Here and there an especially canny and aggressive dealer rang up a really commendable volume of air-conditioning sales, and in consequence *actually made a profit* on this pioneering business. What these men did, how they did it, and what they have learned as a result, should be studied carefully by all dealers who are now in the air-conditioning business or who expect to get into it in the near future.

In this issue of ELECTRIC REFRIGERATION NEWS the experiences of four outstanding air-conditioning dealers (C. L. McCrea of the National Electrical Supply Co., Washington, D. C.; William Hecht of the Montgomery Engineering Co., Jersey City, N. J.; J. Harry Hearman of Trenton, N. J.; and W. J. Davis of the Brandeis Machinery & Supply Co., Louisville, Ky.) are reported in detail in one long and somewhat rambling article. Included in that article are the mature reflections on the air-conditioning business of one of the nation's outstanding specialty distributors, David Trilling of Trilling & Montague, Philadelphia. After watching from the sidelines for some time, and observing carefully every angle he could see, Mr. Trilling has just become a Carrier air-conditioning dealer. His observations on why he has entered the industry, and what he expects to find therein, make interesting reading. All the men quoted in this article were among those present at the recent Carrier convention in Newark.

The experiences of these successful dealers cannot—or should not—be condensed into an air-conditioning sales manual. They are too sketchy, too random, and have too many gaps. A sales manual should be based upon the experiences and knowledge of tens and hundreds of dealers and salesmen from all parts of the nation. Moreover, the axioms of these successful dealers need to bear the test of another year or two of selling against stronger competition.

This, however, is a beginning. Only by studying the methods and results of those who *have* sold air conditioning at a profit can most prospective and novice dealers be assured of getting off to a good start in this pioneering business. And it is to the interests of the industry that what has been learned be disseminated quickly and thoroughly among dealers. Otherwise the early dealer mortality rate will be high, prospective dealers will become prejudiced against the idea, and the industry will get into motion sluggishly.

Experience in 1935 Will Be Important

In 1935 more and more dealers will sign franchises for lines of air-conditioning equipment. Some of them will devote a lot of time, thought, and effort to the business. What they learn about it will be highly important. Manufacturers will find that one of the most important duties their field men can assume in 1935 is the study and reporting, *in detail,* of the experiences had by their dealers.

At the end of the year, if these experiences are properly reviewed, related, and analyzed, the air-conditioning industry should possess a treasure house of information from which a selling philosophy, and possibly a preliminary sales formula, may be evolved.

Dealers Must Be Educated

Of course these experiences of dealers in 1935 will be augmented and enlarged and modified as time goes on, and as the air-conditioning industry attains stature and maturity. Alert sales managers will devise sure-fire formulas, and then it won't be long before correspondence schools will have it all digested and set down in neat little leather-covered books.

But the most important task the air-conditioning industry faces in 1935, we submit, is educating its dealers. And the best way to do that is to study what successful dealers have done and are doing, and spread this knowledge far and wide.

WHAT OTHERS SAY

A National EH&FA?

UNDER a Washington date line Dec. 25, newspapers carried a statement attributed to an "authoritative source" that President Roosevelt has instructed the Electric Home and Farm Authority, a subsidiary of the Tennessee Valley Authority, to be prepared to expand its activities over the entire country. According to the New York *Herald Tribune,* these "preparations to expand the field of activity of the Electric Home and Farm Authority seem likely to emerge as one of the administration's primary inducements to privately owned utilities to cut their rates with the expectation of recouping through enlarged consumption of electricity."

The EH&FA was authorized by executive order on Dec. 19, 1933. Its first purpose was to cooperate with the Tennessee Valley Authority in the promotion of the use of electrical equipment and energy in the home and assist in the wider distribution of consumption devices through consumer credits running up to four years.

The original financing offer applied only to ranges, refrigerators, and water heaters in the low priced TVA models. This was later extended to include pumps and also all models of ranges, refrigerators, and water heaters made by manufacturers who were producing an approved TVA device. Under the EH&FA plan the dealer turns his paper over to the local utility and gets his money.

The utility in turn may discount with the EH&FA. The utility makes the collections. Money is provided by the RFC at a low cost and by using the collection facilities of the power companies the cost of service is greatly reduced.

It would not appear, however, that in this setup the authorities had the interests of the dealers particularly in mind. The government's intention so far as it may be disconcerned is to provide low cost financing as a leverage on manufacturers and utilities to force lower prices for merchandise and lower rates for electric power.

The theory seems to be that low priced goods, low cost finance, and low rates all operating together will move an ever increasing volume of power consuming home equipment and electric service. If the dealer is to play his necessary part in moving the goods, the pressure on price will have to be relaxed. The finance and collection part of the scheme is sound and should be extended.

The dealer needs a source of instalment finance at once low in cost and available to cover all the goods he can sell. But because he prospers or fails from the immediate transactions, because he collects nothing from the customer but his mercantile profit, he must sell goods that carry a high enough dollar margin to keep his business going.—*Electrical Merchandising.*

LETTERS

Johnston's Influence

Merchant Evans Co.
2035 Washington Ave.
Philadelphia, Pa.

Editor:

I found your telegram here yesterday, but did not wire you because I really could not give you exactly what you apparently would like to have, and that is on account of associations of years ago with Geoff Johnston.

We had frequent talks about Western life and localities with which we were both familiar and had spent a great deal of time, but we did not know each other in those years and in those surroundings. He spent several years as a rancher, and at one time as a cow-puncher on the plains, and it was a romantic life which he lived, and loved to look back on and reminisce about.

From the time that I began to take an active interest in association with people in refrigeration, there grew up from my first real contact with Geoff Johnston an ever-increasing personal friendship and respect for his qualities of character. I liked everything about the man: his honesty of purpose; his gentle, modest and sweet personality. There was a great quality of iron resolution about him too, and unquestionably he had appealing qualities of an exceptional sort in drawing confidence and friendship.

I wish I had had more opportunities of seeing him, and his death is a great personal distress to me, and an irretrievable loss to the refrigeration industry.

It was Johnston's tact, common sense and compromising ability that brought the industry together in a closely-knit and harmoniously operating association, and I think that his influence will and should keep this Association strongly tied together for the mutual cooperation that is so necessary for the healthy growth and maintenance of what has become one of the greatest manufacturing industries in America.

THOMAS EVANS, President.

'Welcome Diversion'

Servel, Inc.
Commercial Refrigeration Division
Evansville, Ind.

Editor:

I have noted during recent months the increased amount of air-conditioning news which you have carried in the paper. In my estimation it has made the paper much more readable, and to a great degree has been a welcome diversion from the more or less stereotype news now emanating from the household division.

The opening up of new fields always provides more interesting and exciting news than that of an industry older and more definitely established. So I think you have been entirely right in including in your regular issues of the NEWS as much of the doings of the air-conditioning industry as you could find space for.

In this regard, I emphatically vote against a special publication or supplement to carry air-conditioning news. In my estimation it is much too closely allied to commercial refrigeration to warrant such a division.

I have been very glad to note the emphasis you have lately placed on news in the commercial refrigeration field. This is not only gratifying to us but I hope it is also indicative that commercial refrigeration is now in the saddle for a strong comeback.

W. PAUL JONES,
Sales Department.

Air Conditioning Articles

Ruthrauff & Ryan, Inc., Advertising
360 N. Michigan Ave., Chicago

Editor:

After reading your advertisement in the Dec. 22 issue of *Advertising Age,* we are wondering if you will kindly refer us some comprehensive and pertinent articles on air conditioning?

We are particularly interested in information pertaining to the market for air conditioning and any reference to the sales and advertising aspects of this new industry which you may be able to mention.

R. H. AVERILL.

Answer: The fourth issue of ELECTRIC REFRIGERATION NEWS in each month of the year is designated as the "air-conditioning issue," because it devotes special editorial treatment to the subject of air conditioning. Engineering advances in the air-conditioning field, introduction of new equipment, new applications, market data on air conditioning, and field installation problems are some of the subjects covered in these special issues.

This does not mean that other issues of ELECTRIC REFRIGERATION NEWS do not carry air-conditioning news; in fact, during the past year there has been an air-conditioning section in nearly every issue of the NEWS.

With reference to articles dealing with the market for air conditioning, we have selected a few references as follows:

A very complete summary of how air conditioning is employed in various industries was published on pages 6 and 7 of the June 6, 1934, issue of the NEWS.

The Dec. 26, 1934, issue carried a survey on all air-conditioning installations that have ever been made in Kansas City, classifying them by type of application and size and make of equipment installed. A similar survey will be published in a future issue for Chicago. We hope to publish similar data for from 12 to 20 other leading cities in the country.

Specifications of all leading makes of air conditioners which have a cooling function were published in the Oct. 31 and Nov. 7 issues of the NEWS.

On pages 15, 16, and 17 of this issue is the verbatim account of experiences of a number of Carrier air-conditioning dealers in promoting and selling air-conditioning equipment during the past year. As explained in the editorial on this page, these accounts probably are the closest thing to a "textbook" on air-conditioning selling that has been published to date.

Wants the 'News' Earlier

Refrigeration Research Institute
6122 S. Mozart Street
Chicago, Ill.

Editor:

Regarding deliveries of the REFRIGERATION NEWS. Just recently we asked if it were possible for you to get these papers off to us earlier and our reason for doing so was due to the fact that our club, which was organized to better our knowledge of refrigeration and air conditioning, meets every Friday night. We do not receive the papers until Saturday which makes it necessary for us to hold them up until the next Friday at which time they are distributed—being a week late.

I have taken this matter up with the Postal authorities here and they inform me that if it were possible for you to get these papers off on the Wednesday night train, they would be received here Friday. However, they are going to investigate and endeavor to find out just what causes the delay at this end and we would also appreciate your doing what you can at your end so that we can receive the papers by Friday.

Our members are very anxious for the news contained in this paper and therefore have registered quite a complaint owing to the fact that they do not receive them sooner.

J. A. NASMAN, Librarian.

Answer: Perhaps you noted the publication of your previous letter on page 9 of the January 9 issue, along with others referring to slow delivery of the NEWS by postal service.

We have inquired of our mailing department and find that it has been the practice to handle the wrapping of bulk orders after taking care of the regular run of individual addresses. This results in the shipment of bulk orders to the Post Office late Wednesday afternoon.

Since packages containing various quantities require special handling, it is quite natural for the mailing room to hold up this job until the standardized wrapping and labelling operations are completed. They will endeavor to handle your package special hereafter and get it in the first delivery to the Post Office.

After trying this a couple of weeks will you please let us know if it works out satisfactorily?

From the Barber's Chair

2122½ Main St., Joplin, Mo.

Editor:

Say, George, I haven't cut your hair or shaved you for a long, long time. So if you ever come to Joplin I shall give you a close one. Now, laying all jokes aside, I'm just another barber to you, but I'm interested in electric refrigeration.

I have subscribed to ELECTRIC REFRIGERATION NEWS for two years; also the 1932 DIRECTORY.

It's impossible for me to see or understand how one connected with electric refrigeration can go on and on without the wonderful helps given (by the best in the industry) through ELECTRIC REFRIGERATION NEWS.

No doubt you wonder why I take ELECTRIC REFRIGERATION NEWS. Well, George, I don't intend to always be a barber. (Bought this barber shop in May, '31.) Hope something else turns up before May of '35. Something permanent in the electric refrigeration industry.

I entered Utilities Engineering Institute in home study, March, 1931. Sold electric refrigerators the last two summers here in Joplin. Articles clipped from ELECTRIC REFRIGERATION NEWS *helped* me sell, and were worth many times the subscription price.

The "Service Department" is keen—as my razor, sometimes. Those "Personalities" by you (where I learn the first name of all the big shots, including you) are indispensable. Never leave "Personalities" out again, George. Sorry the staff was broken up at a time like this—but as Mr. F. M. Cockrell said—"the show must go on; the DIRECTORY will be out on time."

LESTER L. CHRISTENSEN.

Result of an A-1 Sales Job

—Reprinted from Esquire.

"Ain't you got no sales resistance at all."

Philadelphia Electric Breaks Sales Records

PHILADELPHIA—A dollar volume of $211,577.26 in domestic load building appliances was sold by employees of the Philadelphia Electric Co., during the "International Stratosphere Sweepstakes" campaign recently conducted by the company. This total represents a considerable increase over the previous high mark of $165,633.92, established in the 1932 "Victory Cruise" competition.

Sales of electric refrigerators during the campaign totaled 551 out of 2,287 prospects submitted. Electric range sales were 226, and 161 water heaters were retailed.

Austin Monty, manager of the merchandise sales department, was in charge of the campaign, and more than 300 prizes were awarded to employees who participated.

Olmsted Exhibits New Atwater Kent Line

SYRACUSE, N. Y. — Central New York dealers saw the 1935 line of Atwater Kent electric refrigerators in the showrooms of the Olmsted Co., of this city, distributor of Atwater Kent radios and refrigerators in this territory.

The Olmsted Co. was established in 1856 as a distributor of saddlery and bicycles, and was a pioneer in the distribution of automotive supplies and radios. The company is still distributing these products in addition to refrigerators. Howard S. Kaslin is vice president and general manager of the company.

Hardware Firm's Sales in '34 Set Record

FREMONT, Ohio — Refrigeration sales of Swint-Reineck Hardware Co., multiple refrigerator dealer here, for 1934 exceeded the combined totals of 1932 and 1933, officials of the organization announced at a recent meeting.

In 1932, the first year, the firm sold 35 electric refrigerators. In 1930, 50 were sold and in 1934, with a quota of the first two years' sales set, a total of 93 electric refrigerators was sold.

Store Secretary Sells 25 G-E's in 9 Months

CHICAGO—Miss Edith Wenstrom, secretary of R. Cooper, Jr., Inc., Store No. 3 at 7923 South Ashland Ave. here, in addition to doing the secretarial work for 25 salesmen, has herself closed 25 retail sales for General Electric refrigerators since March 1 of last year. Miss Wenstrom, a G-E user, stresses "savings" and "convenience" in her talks to prospects.

Operation of Sparton's Antifrost Clock Is Explained

JACKSON, Mich. — The Antifrost clock, which is one of the chief features of the 1935 Sparton refrigerators, is set at the factory so that the refrigerator will automatically defrost from approximately 8 to 9:30 o'clock each morning, states the manual of directions for Sparton refrigerators recently made public by the Sparks-Withington Co.

If automatic clock defrosting is not desired, says the manual, the user should pull out the knob at the right of the clock face and leave it in this position. This permits the clock to operate without defrosting.

To re-start the clock, if the electricity has been shut off temporarily, the user resets for correct time by turning the knob at the right of the clock face, clockwise. If the clock is set during a.m. hours, the hole above the numeral "6" should show white, and if it shows black, the user is instructed to set the clock ahead 12 hours.

When the clock is set during p.m. hours, the hole should show black, and if it doesn't, the user sets the clock ahead 12 hours.

The user then turns the knob at the left of the clock face clockwise, and the clock is set to go.

300 Dealers See Crosley Line at Buffalo

BUFFALO, N. Y. — Three hundred Crosley dealers attended the showing of the 1935 line of Crosley Shelvador electric refrigerators by Ontario Electric Co., local distributor. The afternoon dealer meeting was followed by a dance and floor show.

President Ernest Kronson of the Ontario Co., presided at the meeting, at which Neil Bauer, Crosley field sales manager, and J. L. Block, general sales manager of the Ontario Co., were principal speakers.

800 Hamburg Dealers View New Electrolux

PITTSBURGH — More than 800 dealers and salesmen were present when the 1935 line of Electrolux gas refrigerators was shown for the first time here, by Hamburg Brothers, Electrolux distributor in this territory.

Principle of the Electrolux refrigerating system was explained by Prof. Steining of the University of Pittsburgh. Other speakers were President E. A. Hamburg, Harold Kay, Hamburg sales manager, George L. Roach, sales manager of Electrolux, C. R. Miller, Electrolux field representative, and Dan Stuber of the sales promotion department.

Code for Makers of Ice Boxes Amended

WASHINGTON, D. C.—Approval of amendments to the code of fair competition for the household ice refrigerator industry was announced last week by the National Industrial Recovery Board.

Included in the amendments are provisions for a tolerance in the maximum weekly working hours during peak periods, with time and a half overtime rates; a six-day week, except for watchmen and firemen; standards of safety and health for employees, prohibitions against reclassification of employees to evade the code and discharge of employees for complaining of code violations; clarification of the powers of the Code Authority and right of review by the NRA of Code Authority actions.

Moreover, terms of sale of the products of the industry are made easier, permitting invoices to be dated ahead; export sales are exempted from terms of the code; an open price filing system is established and definite power is given to the Code Authority to submit amendments to the code.

Indianapolis Dealers See Crosley Line

INDIANAPOLIS — The Kiefer-Stewart Co., Crosley distributor in the Indianapolis area, introduced the 1935 Crosley line of refrigerators and radios to more than 100 dealers during its mid-winter meeting here Jan. 15.

Cuthbert Carey, Crosley district manager, O. C. Maurer, head of the radio and refrigeration division of the Kiefer-Stewart Co., G. Barret Moxley, president, and J. Edward Stiltz, secretary-treasurer, addressed the meeting.

Union Steel Introduces Diamond Mesh Shelf

ALBION, Mich.—"Shelf X" is the name given by Union Steel Products Co., of this city, to a diamond mesh material that is being introduced by the company to provide a flat surface on steel wire shelving designed for electric refrigerators or ranges.

"Shelf X" is made of expanded metal that has been flattened. The surface is electrically welded to the standard steel wire frame of which it makes the shelf top—making the shelf smooth and without a ridge around the edge, the frame being underneath.

Union Steel Products is also announcing that the "safety slide" principle which it has applied to refrigerator shelving, is also applicable to any of the steel wire trays or baskets which it makes, to fit any use of steel wire shelving.

By a simple device, the shelf is provided with a slide that engages both the top and bottom of the runner. The shelf may be pulled out practically its entire length and is then stopped by a wire bend. Pulled out at length, the shelf is still held level, supporting whatever weight may be piled on it.

Consolidated Gas Displays Quintuplets' Electrolux

NEW YORK CITY — The kerosene-operated Electrolux refrigerator that was used for the Dionne Quintuplets, to protect the milk supply of the five celebrated baby girls, was on display all during January in the showroom of the Consolidated Gas Co. here. The Electrolux on display has been replaced, in the Dafoe Hospital in Canada, by a similar refrigerator.

189 G-E's Installed In N. Y. Apartment

NEW YORK CITY—General Electric refrigerators—189 of them—including 158 P-134 two-door models using direct current, have replaced a central refrigerating plant in the Belnord apartments, one of the largest buildings in the metropolitan area, occupying an entire square block on Broadway between 86th and 87th Sts.

The building, which was erected about 20 years ago, was equipped with a central refrigerating plant and brine circulating system to each of the apartments. The plant consisted of a 25-ton compressor, and two brine circulating pumps which alternatingly operated continuously.

While the compressor equipment was in good condition, the brine circulating system was causing an increasing amount of trouble, due to leaks which necessitated the replacing of piping. There are 189 apartments in the building, consisting of suites of from 6 to 11 rooms.

The G-E order called for 158 model P-134's, 28 F-4's, and three F-7's at a cost of more than $60,000. The sale was made by H. G. Bancroft of the apartment house division of Rex Cole, Inc. The apartment building is under the management of Mark Rafalsky & Co.

G-E Sponsors School In Chicago Hotel

CHICAGO—For use in a series of cooking schools, an all-electric kitchen was installed recently in the Mirror room of the Morrison hotel here by R. Cooper Jr., Inc., local General Electric distributor.

Demonstrations are given each Friday afternoon and evening under the direction of Mrs. Grace Viall Gray.

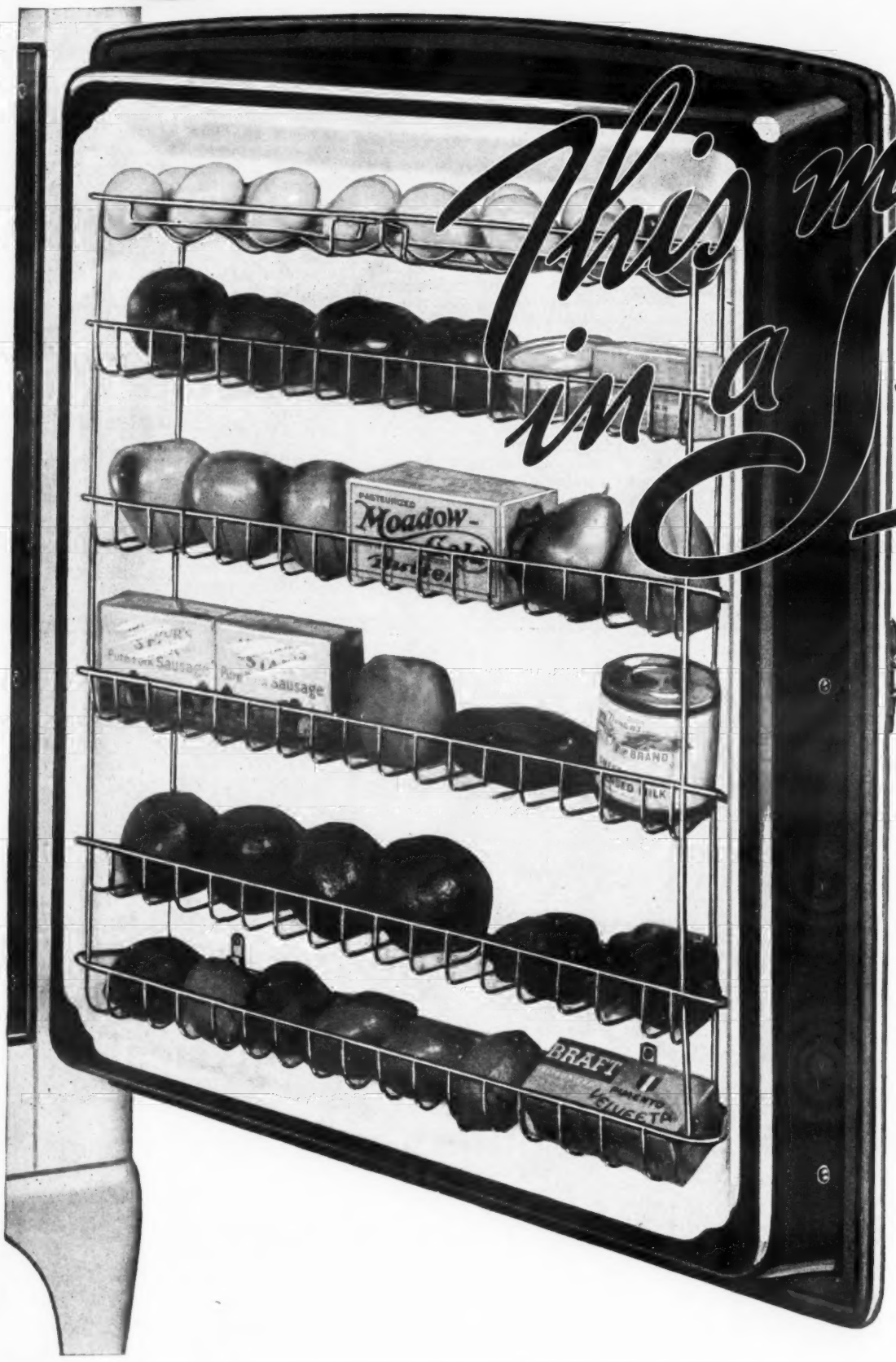
The executive, sales and manufacturing policies which have guided its destinies are as enduring a part of Universal Cooler as its physical properties. Customers will receive the highest character of service—the public an outstanding degree of product dependability — always.

UNIVERSAL COOLER CORPORATION

DETROIT, MICHIGAN BRANTFORD, ONTARIO

MANUFACTURERS OF A COMPLETE LINE OF HOUSEHOLD AND COMMERCIAL REFRIGERATION EQUIPMENT

6 WORDS THAT MEAN



This much more in a Shelvador

EXCLUSIVELY IN CROSLEY ELECTRIC REFRIGERATORS

NINE brand new models—enhanced in beauty, improved in performance where possible. And a new selling slogan—"This much more in a Shelvador!" A slogan that is at once a claim and a demonstration of a definite, tangible advantage that distinguishes the Crosley Shelvador from every other electric refrigerator.

"This much more in a Shelvador"—and twice as easy to find! For the housewife, 50% more "usable" space and half the hunting. For the Crosley dealer, sales, sales, SALES!

During 1934 the Crosley Shelvador was the fastest growing electric refrigerator, in point of sales, in the entire field. And 1935 will be as much greater than 1934 as 1934 was ahead of 1933. Why? Because the Crosley Shelvador is the one outstanding feature electric refrigerator on the market. It is way ahead in roominess and convenience, ahead in beauty, ahead in quality, ahead in value. Its advantages are so obvious, so easy to see, that no housewife can fail to realize that if she doesn't get a Crosley Shelvador she doesn't get ALL that electric refrigeration can give her.

Think of the all-purpose utility of the 1935 Crosley Shelvador line: Two table model Shelvadors ranging from 2 to 3 cu. ft. capacity; 4 Shelvador models from 4 to 7 cu. ft.; 3 Tri-Shelvador models from 4.3 to 7 cu. ft.

Prices that start as low as $79.50, delivered. No wonder—you cannot afford NOT to handle Crosley during 1935. Get in touch with your Crosley distributor.

POWERFUL 1935 ADVERTISING CAMPAIGN

Every housewife who reads or hears will know about Shelvador during 1935; for Crosley is inaugurating the biggest, most far-reaching, most commanding advertising campaign in Shelvador history. In many national publications, over the mighty WLW—"the Nation's Station"—the story will be told dramatically, vividly, effectively.

THE CROSLEY RADIO

(Pioneer Manufacturers of Radio Receiving Sets)

ALL PRICES INCLUDE DELIVERY..INSTALLATION..ONE YEAR FREE SERVICE

BUSINESS

...AND 9 BRAND NEW MODELS

For every purse
For every family
For every condition

2 TABLE SHELVADOR MODELS

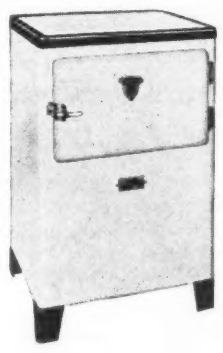


Table Shelvador FR-20
2 cu. ft. NET capacity. 2 ice trays—42 cubes. Semi-hermetic rotary compressor. — Dimensions: 36" high, 23⅝" wide, 25" deep.

$79.50

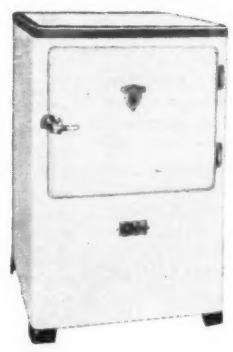


Table Shelvador FR-30
3.1 cu. ft. NET capacity. 2 ice trays—42 cubes. Rotary compressor. Same dimensions as FR-20.

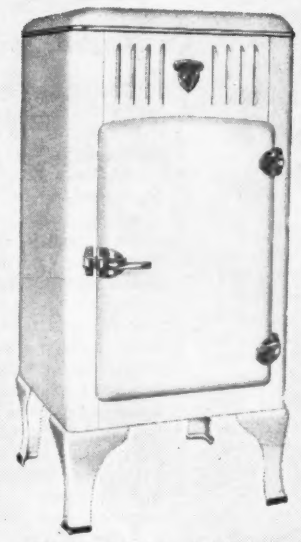
$94.50

NEW ROTARY COMPRESSOR

Used on table models. Only 3 moving parts; virtually trouble-free. Semi-hermetically sealed. Uses Thermon liquid—non-poisonous, non-inflammable, non-corrosive, odorless.

4 SHELVADOR MODELS

ALL CROSLEY SHELVADOR and TRI-SHELVADOR MODELS HAVE THESE FEATURES: Automatic interior illumination, ventilated front, no-stop defrosting control, stamped-brass hardware, chromium plated, stainless steel rim around top, white lacquer, porcelain interior.



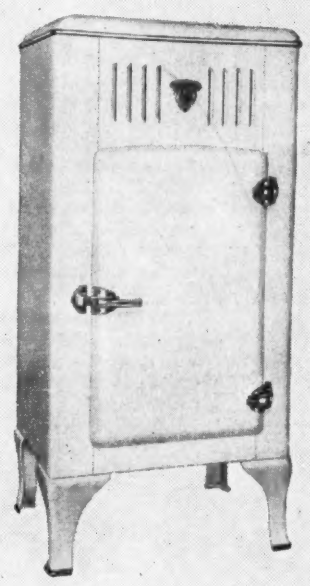
Shelvador Model FA-40
4.09 cu. ft. NET capacity. 8.6 sq. ft. shelf area. 2 ice trays—42 cubes. Dimensions: 52¾" high, 23½" wide, 25½" deep.

$112.50

Shelvador Model FA-50
5 cu. ft. NET capacity. 11.3 sq. ft. shelf area. 2 ice trays—42 cubes—one double-depth tray. Dimensions: 56¼" high, 25⅞" wide, 24½" deep.

$129.50

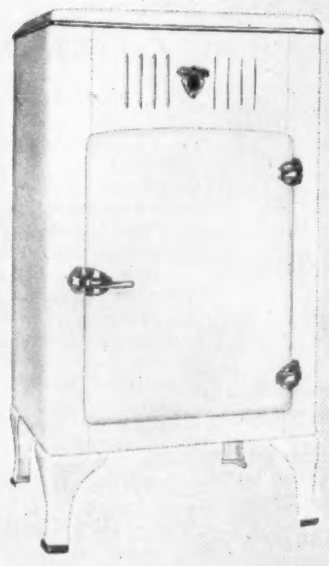
PFA-50: Same with porcelain exterior **$152.00**



Shelvador Model FA-60
6 cu. ft. NET capacity. 13.5 sq. ft. shelf area. 3 ice trays—63 cubes—one double-depth tray. Dimensions: 56¼" high, 30⅜" wide, 25⅜" deep.

$149.50

PFA-60: Same with porcelain exterior **$174.50**



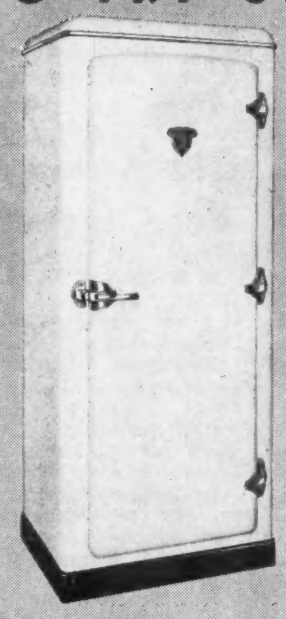
Shelvador Model FA-70
7.08 cu. ft. NET capacity. 14.9 sq. ft. shelf area. 4 ice trays—84 cubes—one double depth tray. Dimensions: 57½" high, 32¾" wide, 25⅞" deep.

$169.50

PFA-70: Same with porcelain exterior **$194.50**

Tested and Approved by Good Housekeeping Institute Conducted by Good Housekeeping Magazine

3 TRI-SHELVADOR MODELS



Tri-Shelvador Model F-55
5.51 cu. ft. NET capacity. 11.6 sq. ft. shelf area. 3 ice trays—63 cubes—one double-depth tray. Dimensions: 57⅛" high, 29" wide, 24⅞" deep.

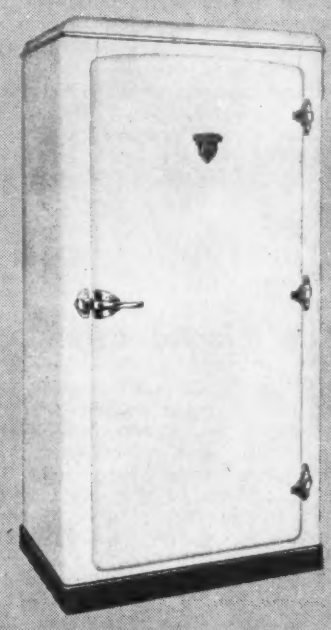
$164.50

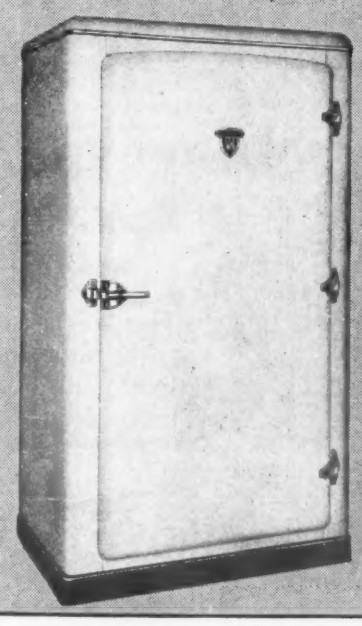
PF-55: Same with porcelain exterior **$187.00**

Tri-Shelvador Model F-43
4.3 cu. ft. NET capacity. 9.15 sq. ft. shelf area. 2 ice trays—42 cubes—one double-depth tray. Dimensions: 56⅜" high, 23⅞" wide, 23½" deep.

$139.50

PF-43: Same with porcelain exterior **$159.50**





Tri-Shelvador Model F-70
7.08 cu. ft. NET capacity. 14.9 sq. ft. shelf area. 4 ice trays—84 cubes—one double-depth tray. Dimensions: 58⅛" high. 32¾" wide, 25⅞" deep.

$189.50

PF-70: Same with porcelain exterior **$219.50**

Crosley Tri-Shelvador Adds 3 Exclusive Features to the Famous Shelvador

The Tri-Shelvador has all the features of the Shelvador, and in addition the following:

1—**SHELVATRAY.** Handy shelf that drops to horizontal position. Place articles on Shelvatray and carry them (Shelvatray and all) to table, range or cabinet. (Patent pending).

2—**SHELVABASKET.** A non-refrigerated basket on bottom of door for greens, carrots, cabbages and the like. (Pat. pending.)

3—**STORABIN.** Non-refrigerated bin in bottom part of cabinet for reserve bottles, potatoes, onions, and other bulk items. (Patent pending.)

In addition—self-closing stainless steel door to freezing chamber.

Montana, Wyoming, Colorado, New Mexico and west, prices slightly higher.

NRA MEMBER U.S. WE DO OUR PART

CORPORATION • CINCINNATI

POWEL CROSLEY, Jr., *President*

Home of "*the Nation's Station*"—WLW—500,000 watts—most powerful in the world—70 on your dial

ALL PRICES INCLUDE DELIVERY..INSTALLATION..ONE YEAR FREE SERVICE

COMPANION MERCHANDISE

Hotpoint Stresses Load Building & Modernization

CHICAGO—Load building and modernization were the twin themes stressed at the recent winter meeting, here, of district managers and sales representatives of Edison General Electric Appliance Co.

Skits, motion pictures, voice transcription were used to present the year-'round sales and advertising program. In addition to direct mail, newspaper, and point of sale advertising, a national magazine schedule, to commence shortly, was outlined by Advertising Manager W. A. Grove.

Important feature of Hotpoint's campaign is "The Load Builders," a production emphasizing the importance of electric cookery and water heating to utilities in building their load and adding to their revenue. Value of the government's home modernizing program is also stressed. Eleven troupes will carry the sales story to dealers in approximately 300 performances during the next few months.

At the meeting here, Miss Frances Weedman, head of the Hotpoint Home Economics division, conducted the cookery skit. To demonstrate the practicability of absentee cooking, three meals were prepared on a range which was completely sealed in cellophane from the time the food was placed inside until ready to serve. The water heater sketch depicted the humor and tragedy encountered by a family attempting to satisfy its needs for hot water without modern automatic electric water heating.

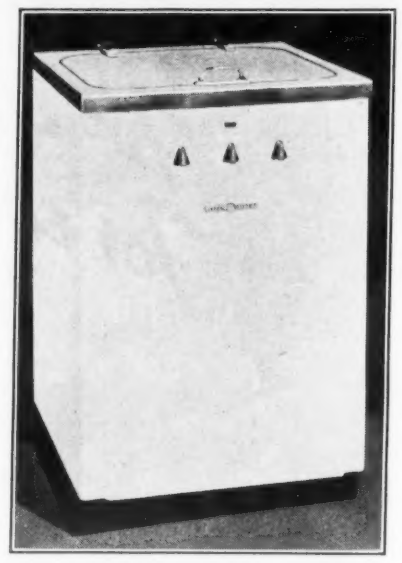
Motion pictures and talking records are utilized to describe the construction and mechanism of the appliances.

The Hotpoint ranges were designed by Mrs. Helen Hughes Dulany, internationally known stylist, who first fashioned tableware from stainless steel.

Walter Ayers Appointed Sales Manager of Electromaster

DETROIT—Appointment of Walter C. Ayers to sales manager for Electromaster, Inc., manufacturer of electric ranges and water heaters, was announced recently by Gerald Hulett, vice president of the company. Mr. Ayers has been a member of Electromaster's executive sales staff for several years.

G-E Glasswasher



Just introduced by General Electric is this styled glass-dishwasher for commercial applications.

* * *

Glasswasher Is Made For Commercial Use

CLEVELAND — A new General Electric dish-glasswasher for commercial use has just been introduced by the company's specialty appliance sales department. It can be installed as a part of existing work surfaces or as a separate piece of equipment by the addition of a base-type, all-steel cabinet. Price of the new piece of equipment is $199.50, f.o.b. factory.

An adaptation of the G-E dishwasher, the new glasswasher, equipped with specially designed trays, applies the dishwasher principle in the washing of glassware. Test operations in several restaurants during the past year show the machine capable of handling 150,000 pieces per month.

The market for the new glasswasher, says C. M. Snyder, manager of the dishwasher division, includes every type and class of public eating establishment.

The motor capacity of the glasswasher is ⅓ hp., making possible continuous operation where required. The control is simple with three conveniently placed knobs for manual operation of the water valve, drain valve, and motor contact.

Spray washing and rinsing principle of the domestic G-E dishwasher has been retained without change.

1,000 Water Heaters & Ranges Sold in Philadelphia

PHILADELPHIA—More than 1,000 electric ranges and water heaters were sold in this territory during 1934, the result of an intensive campaign during the last six months in which 486 dealers from this city and Bucks, Cheater, Delaware, and Montgomery counties were participants.

The campaign, lasting from mid-June to the end of the year, showed sales of 699 electric ranges and 114 water heaters. In addition, 200 ranges were sold as a unit to a building development, and were not included in the campaign figures.

The Electrical Association of Philadelphia, sponsor of the drive, offered $1,500 prize money to the various class-winners.

Services of the Association's home economist was accorded dealers throughout the campaign, and 104 electric cookery demonstrations were held in various dealer establishments in the territory.

Newspaper and radio cooking schools were also utilized to increase sales, and the Association backed the drive with newspaper, radio, and billboard advertising.

The utility company cooperated with individual dealers by taking over the financing where necessary, and offered free installations of ranges and water heaters under standard conditions. In some cases, prospects were asked to make a down payment of only $2, and given 36 months to pay the balance.

Seven-piece aluminum cooking utensil sets were given as premiums.

Founders Substantial Holders of Crosley & Sparton Stock

WASHINGTON, D. C. —Two of the leading refrigeration and radio manufacturing companies are extensively owned by their founders, federal reports revealed recently. Information concerning officers and directors owning more than 10 per cent of listed issues was required for the Federal Securities and Exchange Commission.

The Crosley Radio Corp., Cincinnati, with a total share capital of 540,000, lists Powel Crosley, Jr., its founder and president, as owning 152,699 shares, valued at $2,061,000. Mrs. Powel (Gwendolyn A.) Crosley, Jr., owns 130,910 shares, worth $1,770,000, and Lewis M. Crosley, vice president and general manager of the company and a brother of Powel Crosley, owns 4,394 shares, valued at $69,300. The total family holdings reach a value of nearly $4,000,000.

The Sparks-Withington Co., Jackson, Mich., capitalized at 913,000 shares total, lists Captain William Sparks, its founder and president, as owner of 119,238 shares.

Shirley Temple Cooks

Shirley Temple, the child actress that captivated a nation, tackles the preparation of a dinner with the aid of a super-sized G-E range.

Crosley Develops 2-Tube Radio Selling for $9.99

CINCINNATI—To retail at $9.99, a two-tube radio claimed to have four-tube effectiveness, operating on either alternating or direct current, has recently been introduced by the Crosley Radio Corp.

It is called the Crosley Sampler, and is said to be the first radio in this price group to be introduced by a nationally known manufacturer.

The Sampler is made of standard parts, including two double-purpose tubes and a new type of loud speaker, which measures the full size of the front of the radio. It receives regular broadcasts and some police calls. Sensitivity is controlled by a combination manual volume and sensitivity control. The set weighs only 4¾ lbs., and measures 6⅛ in. high, 6¾ in. wide, and 5 in. deep.

The midget radio comes in two models, A and B. The panel in Sampler A is decorated with ships and a mariner's compass. The one in Sampler B is modernistic, and consists of illustrations in brilliant colors depicting different broadcasts.

The set is designed to reach (1) people in the lower income brackets, (2) those who already have a larger radio but would like an additional one (in the kitchen, nursery, playroom, or bedroom), and (3) farmers near power lines.

Oil-O-Matic Makes Trial Rentals in Chicago

BLOOMINGTON, Ill.—Williams Oil-O-Matic Heating Corp., of this city, recently ran a full page, three-color advertisement in the *Chicago Sunday Tribune*, featuring its "installation at our expense," plan.

Phrases such as "no money down," "three years to pay," "removal if dissatisfied," and "a nominal rental price of $8.90 per month," indicate the general theme. The advertisement is qualified by "This trial offer is made only in the metropolitan Chicago area."

Binks Reclaiming Booths Used by Hotpoint

CHICAGO—A battery of 10 Binks water-wash reclaiming type booths, six of them equipped with special conveyor systems to handle volume production of Hotpoint electric ranges, has been put in operation by General Electric Appliance Co. in its plant here.

Bowe Joins American Tin Plate Staff

PITTSBURGH — Walter A. Bowe, formerly advertising manager of the air-conditioning department of the General Electric Co., recently joined the general office sales organization of American Sheet & Tin Plate Co. of this city.

70 Dealers See Crosley Line in Quincy, Ill.

QUINCY, Ill.—Tenk Hardware Co., Crosley distributor here, was host to 70 dealers at the first showing of Crosley electric refrigerators and radios in this territory. Howard Souther, Crosley district manager, was speaker.

Apex Washers Feature Convenience Controls

CLEVELAND — Convenience controls are the chief features of the 1935 Apex line of washer and ironer models, introduced at the House Furnishing Exhibit held at the Stevens hotel here recently.

Agitator action of the washer, using the double dasher, is controlled by a pedal located just above floor level. The washing period may be set automatically by a timer attached to the wringer column.

The discharge of waste water is controlled by a pedal situated close to the floor line.

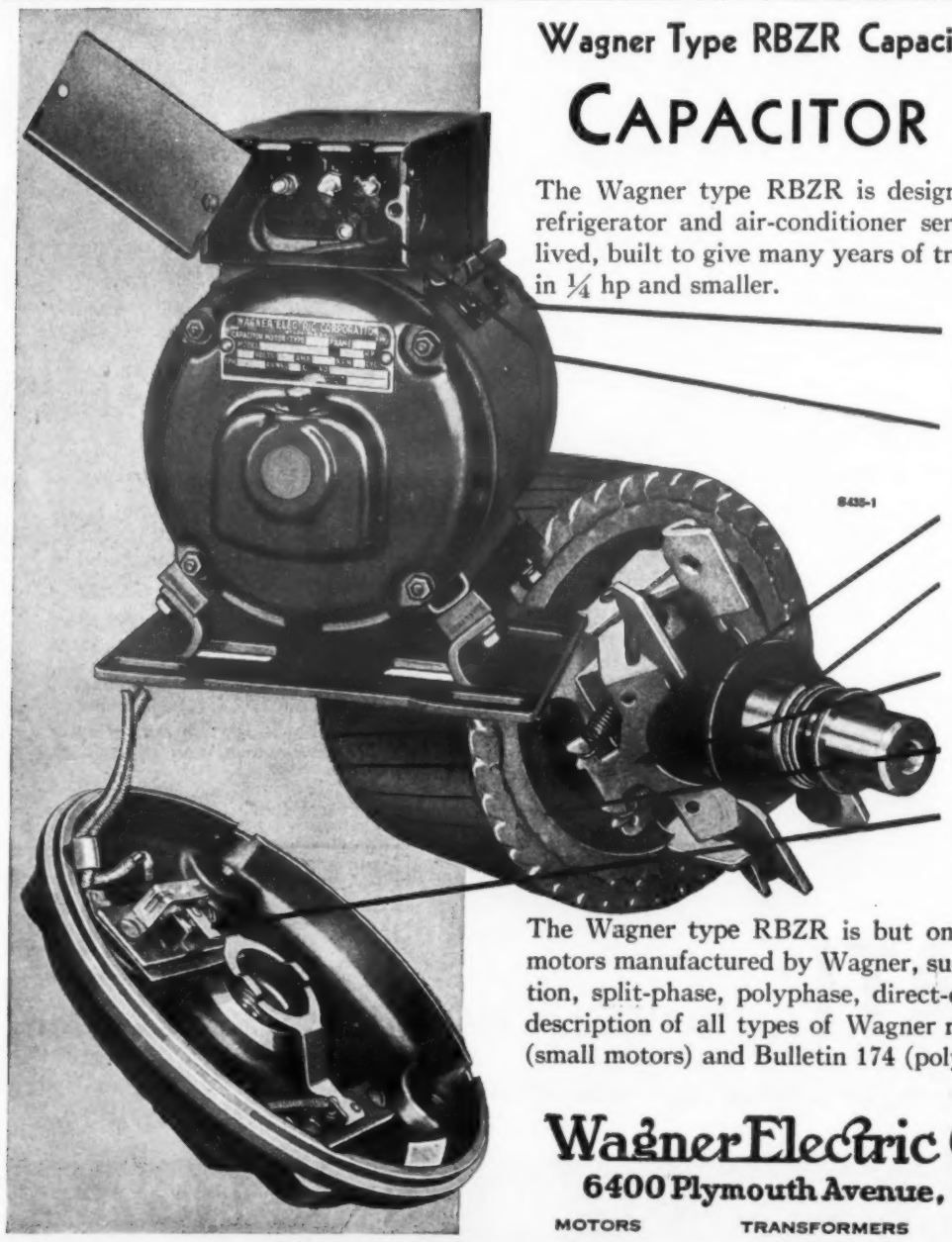
Other features of the new line of washers are grounded filler hose, interlocking wringerhead to prevent change of wringer position while in operation, finger tip realese to open wringer.

The fixed shoe—moving roll arrangement and conventional knee and finger tip controls—of the ironer has been retained, but the action of the controls has been speeded up. Use of a separate finger touch lever located on the right side of gear casing aids pressing.

Alabama Dealers See New Crosley Products

BIRMINGHAM, Ala. — Alabama Crosley dealers had their first glimpse of the 1935 line of Crosley electric refrigeration and radios Jan. 15, at the Tutwiler Hotel here, under the auspices of the Perfection Mattress & Spring Co., Crosley distributor here.

Speakers included H. E. Richardson, assistant of Powel Crosley, Jr., president of the Crosley Radio Corp., and Jim Clary of the distributor's staff.



Wagner Type RBZR Capacitor-Start Induction-Run

CAPACITOR MOTORS

The Wagner type RBZR is designed and built especially for refrigerator and air-conditioner service. It is ultra-quiet, long-lived, built to give many years of trouble-free service. Available in ¼ hp and smaller.

Conduit box has outlets for rubber-covered cables, and is also provided with knockouts for standard BX connectors.

Terminal board is readily accessible for making line, thermostat, switch, and other connections.

Switch hub is of bakelite, assuring trouble-free switch actuation.

Cork thrust-washer eliminates endplay noise.

Governor mechanism is silent and positive-acting, made of rust-proof steel, silenced with felt bumpers.

Rotor is dynamically balanced to eliminate vibration.

Quick make-and-break, long-lived starting switch is thoroly insulated with bakelite.

The Wagner type RBZR is but one of many types of small motors manufactured by Wagner, such as repulsion-start-induction, split-phase, polyphase, direct-current, etc. For complete description of all types of Wagner motors, ask for Bulletin 167 (small motors) and Bulletin 174 (polyphase motors.)

Wagner Electric Corporation
6400 Plymouth Avenue, Saint Louis, U.S.A.
MOTORS TRANSFORMERS FANS BRAKES

for perfect service ANSUL

REFRIGERANTS

SULPHUR DIOXIDE

Pure, bone dry and free from all foreign materials. Contents of every cylinder analyzed before shipment. Available at 50 warehouses conveniently located.

METHYL CHLORIDE

Fast freezing, stable and non-corrosive. Contents of every cylinder tested before shipment to assure low moisture and acid content. Available in any quantity, spot or contract shipments.

ANSUL CHEMICAL CO.
MARINETTE-WISCONSIN

HOME SERVICE

Kelvinator Home Economists Plan 3 Types of Schools At Annual Meeting

(*Concluded from Page 1, Column 1*)
son declared, should discuss refrigerator models within the means of the group addressed. That did not mean, she said, that deluxe models were not to be used or sold when possible, but that the home economist should "use her head" and decide for herself which model to "sell," in line with the apparent average income of the women in the audience.

Home Calls Important

The home call is very important for the utility company in the opinion of Miss Ada Bessie Swann of Public Service Co., Newark. She declared that if the home economist, through the home call, can build up confidence in the housewife, that housewife may be a future customer, or may lead to another customer.

These home calls should be continued after the sale of the refrigerator as well as before. The contented user will aid in the sale of other refrigerators, and, said Miss Swan, the often-repeated phrase "use the user" really pays.

At the distributor and dealer meeting, attended by 28 of the group, meter plans for selling refrigeration were discussed.

Meter Plan Explained

"The meter plan is especially adaptable for the present refrigeration market, where the average income of the refrigerator purchaser is $125 per month," stated V. J. McIntyre, manager of retail store division of Kelvinator Corp.

The object of the 1935 meter plan is to get coverage in smaller cities and towns where this type of selling is more successful due to less competition, he said.

Mr. McIntyre demonstrated a new sales gadget—a meter in a case—which may be carried by the salesman to enable him to get into the home more easily than with a mere smile and sales talk.

"The meter plan opens up a wider market," said Mr. McIntyre, "because many men will buy an electric refrigerator when they find out that their wives can pay for said refrigerators out of their allowances by merely dropping coins in the meter boxes."

He quoted the case of one man, who lived outside a small town, and was determined to buy a refrigerator on the meter plan. The dealer explained that it would be difficult to collect coins deposited in the meter box when he lived so far from town, and suggested that he buy a refrigerator on the same terms, but send the money in to the dealer at regular intervals.

The prospective buyer said: "No, that won't do. You see my wife has agreed to pay for the refrigerator out of her allowance and I know I'll have to pay for it in the end unless we have one of these meter things."

Said the dealer: "I'll fix that—I'll install one of our meter refrigerators and I'll give you the key to the meter. Then *you* can collect the money at stated intervals and send it in to me."

Explains Cooking School Plans

Miss Dorothy Covert of Kelvin Kitchen said that Kelvinator Corp. through three definite cooking school activities—the cooking school, the hostess school, and cooperative newspaper schools—would stress "cooking with cold" this year as it was when the cooking schools in the Kelvinator organization began.

Each home economist, whether a part of a distributor organization, power company, or dealer company, must decide for herself, stated Miss Covert, which type fits the particular city or town in which she is located.

The fact that some sort of cooking school is possible, no matter where one is, was illustrated briefly by Miss Covert. She related that the only place she could find in a certain small town to hold a demonstration was in a funeral parlor. It was a successful one too, she averred, in spite of the fact that she stirred her cake on a board laid between two caskets.

Editors of *McCall's* have had their troubles with electrical equipment, said Editor Splint.

"In print," she stated, "it's hard to make equipment come alive. Equipment moves faster than anything else except magazines. Editors of *McCall's* hesitated for a long time over electric refrigeration, because not many people had electric refrigeration. Now everything is said in terms of use and wherever possible tied up with food or people.

"The job of editors of our magazine," said Miss Splint, "is not to sell equipment for the industry, but to create interest in the equipment." With an audience of 2,500,000 women, prospects are surely created, she believes.

Miss Splint displayed an article, "Cooking a Casserole," by Miss Ada Bessie Swann, which appears in the current issue of *McCalls*. The second article of the series will be written by Miss Fern Snyder of Atlanta, and the third by Miss Lovejoy of Pittsburgh.

Rector Gives Recipes

Charming, jovial, white-haired George Rector understands the problems of a small home as well as "Rector's New York." Efficient and smooth in doing his work, he kept up a continual line of chatter and—presto—a luscious salad or delicious canape appeared in no time. He explained exactly how the housewife could prepare such a salad or canape in her own home, and just what could be substituted if any of the delicacies used happened to be scarce.

"Diamond Jim Brady was the best 10 customers Rector's ever had," says Rector, and related several tales of that renowned gentleman. Diamond Jim Brady had a 14-oz. gold pencil with a diamond as large as a nickel in the place where an eraser ought to be. Rector's comment was "I always say any man who can afford to have a diamond like that where an eraser ought to be—needs no eraser."

Always amazed at Diamond Jim's appetite, Rector asked him one time, "When do you know when your appetite is sated?" and Brady replied: "I live to eat . . . I always allow 10 inches from my waist line to the table, and when my waist line reaches the table, I move back 10 inches."

Following are some of the recipes demonstrated by Rector during his chat. Rector, by the way, says "I am not a cook—I am not a chef—I am a consultant in the culinary art."

Molded Cheese Salad

2 envelopes (2 tablespoons) granulated gelatin
¼ cup cold water
½ cup hot water
½ pint cottage cheese
½ pint sweet cream, whipped
½ cup mayonnaise
½ cup chili sauce
Juice of half lemon
1 tablespoon tarragon vinegar
1 teaspoon salt
1 light pinch cayenne.

Soak gelatin in cold water for five minutes. Add hot water and stir over low heat until melted, but do not boil. When cool, add balance of ingredients. Grease mold with olive oil and fill with mixture and place in refrigerator until thoroughly chilled and set.

Crabmeat Canapes

(Favorite of Diamond Jim Brady)

½ lb. crabmeat (fresh or canned)
1 can cream of mushroom soup
2 tablespoons sherry
1 tablespoon chopped pimientos
1 tablespoon chopped green peppers (blanched)
1 tablespoon butter
½ teaspoon salt
1 light pinch cayenne pepper
Bread crumbs.

Heat the crabmeat in the soup. Add seasonings, peppers, sherry, and butter. Stir well. Spread mixture neatly, building up from center on rounds of toast, cut 3 inches in diameter. Sprinkle with bread crumbs, dot with butter, and brown in oven.

Main event of the final day of the convention was the inspection of the air-conditioned home now under construction near the Kelvinator plant. Moving pictures were taken. Officials who made the trip with the home economists were:

G. W. Mason, president; H. W. Burritt, vice president in charge of sales; H. G. Perkins, vice president; R. I. Petrie, domestic sales manager; H. D. Markland, assistant domestic sales manager; Walter Jeffrey, advertising and sales promotion department.

Delegates who attended the convention were as follows:

Norma Niehoff, Kelvinator branch, Buffalo; Phyllis Harris, Kelvinator branch, Detroit; Carolyn Ely, Kelvinator branch, Cambridge, Mass.; Jean Stone, Kelvinator branch, Chicago; Virginia Starr, Kelvinator branch, Atlanta; Margaret Burge, S. Carolina Power, Charleston, S. C.; Addie Malone, Southern Public Utilities, Winston-Salem, N. C.; Nell Brownlee, Southern Public Utilities, Spartanburg, N. C.; Ella Outland, Southern Public Utilities, Burlington, N. C.; Blanche Flynn and Celia Maccani, Commonwealth Edison, Chicago.

Reva Stewart, East Tennessee Electric, Knoxville, Tenn.; Evelyn Van Schoych, Rowlands-Halleck, Lima, Ohio; Delphine Lerschen, Public Service of New Hampshire, Manchester, N. H.; Ethel Stark, Northern States Power, Minneapolis; Elizabeth Wright, Krich Distributing Co., Newark; Ade Bessie Swann, Public Service Co., Newark; Elizabeth Meehan, Rackcliffe Bros., New Britain, Conn.; Florence Williams, Graybar Electric, Omaha; Buehlah Harris, Gulf Power, Pensacola, Fla.

Mary Egger, Isaac Walker, Peoria, Ill.; Madeline Hanley, Cumberland Power, Portland, Me.; Lucille Stonell, Kirkmeyer Electric, Richmond, Va.; Polly Gade, Graybar Electric, Seattle; Louise McCullough, Witte Hardware, St. Louis; Mary Kirk, Graybar Electric, Syracuse, N. Y.; Marion Gottlieb, Graybar Electric, Cincinnati; Ruth Murphy, Pixley Electric, Columbus, Ohio; Ruth Carmen, Elmyra Light & Heat, Elmyra, Ohio; Frances Howard and Vivian Bushong, Carolina Light & Power, Raleigh, N. C.; Ann Vandiver, Durham Public Service, Durham, N. C.; Margaret Doughty, Carolina Sales, Greenville, S. C.; Mrs. Katherine Warne, Bohman-Warne, Hagerstown, Md.; Blanche Mitchell, State Distributing Co., Indianapolis; Dorothy Swift, Consumer's Power, Grand Rapids, Mich.; Amy Jean Vaneklesen, Consumer's Power, Muskegon, Mich.

Betty Garrett, Williams Distributing Co., Clarksburg, W. Va.; Esther Lee Bride, St. Louis; Mary Gardiner, Wright Shoffner, Port Huron, Mich.; Emma Lou Pabst, Good Housekeeping Shops, Detroit; Helen Farwell, Farwell Sales, Flint, Mich.; Emma Maurice Tighe, Boston Edison Co., Boston; Sarah Thomas, Georgia Power Co., Athens, Ga.; Mrs. Mamie K. Taylor, Georgia Power Co., Atlanta; Betty Davis, Kalamazoo, Mich.; Mary H. Nickerson, Bangor Electric Co., Bangor, Me.; Marguerite Presnell, Electric Kitchen, Detroit.

Eugenia Thomas, Alabama Power Co., Tuscaloosa, Ala.; Erline Hubbard, Alabama Power Co., Birmingham, Ala.; Mabel Nimmo, Graybar Electric, Minneapolis; Marjorie V. Burton, Virginia Public Service, Newport News, Va.; Marion Hafey, Geo. F. Dent Co., Bay City, Mich.; Ann B. Keyser, Virginia Public Service, Charlottesville, Va.; Ethel M. Shaw, New Hampshire Gas & Electric, Portsmouth, N. H.; Franc Robinson, Sandwich, Ont.; Belle Lippert, The Milwaukee Electric Railway & Light Co., Milwaukee; Laura M. Rischman, Buffalo Niagara & Eastern Power Corp., Buffalo; Bertha Lage, Sioux Falls, S. D.; Helen Campbell, Chatelain magazine, Toronto, Ont.; Katherine Caldwell, Ladies Journal, Toronto, Ont.; Sarah Field Splint, editor, McCall's magazine, New York City; Lucy Maltby, Corning Glass Co., Corning, N. Y.

Distributor Stages Low Cost Cooking Schools

WASHINGTON, D. C.—Three-day-a-week cooking schools, costing $15 weekly, have been run continuously since last April by the Edgar Morris Sales Co., local Westinghouse distributor.

The schools are managed by a group of three people, called the Home Service Institute. The Edgar Morris Co. supplies the appliances for the stage, runs an advertisement once a week in the *Washington Shopping News,* which has a circulation of 133,000, and mimeographs the menus used each week.

The schools are operated as follows:

Various church organizations call the distributor. The distributor refers the names to the manager of the Home Service Institute. The institute pays the church organization $10 for the use of the church auditorium, and in return for the $10, the church posts a notice about the cooking school on the bulletin board or prints it in the church's weekly bulletin.

Arrangements are made between the Home Service Institute and various food manufacturers or wholesalers to use their products, and these manufacturers or distributors are charged $10 or $15 per week.

No retaining fee is paid to the Home Service Institute by the Morris Co., but it is announced from the stage at the beginning of each school that the Edgar Morris Sales Co. is responsible for the cooking school. The profit gained by the Institute is derived from income from food manufacturers and wholesalers.

The Westinghouse distributor supplies for the stage each week a refrigerator, range, mixer cabinet with mixer and attachments, and a washer. The power company makes the hookup free of charge for the range.

The operators of the cooking school provide market baskets full of food donated by the manufacturers or distributors, as prizes for the drawing each day.

Four night sessions were recently held on the main display floor of the Edgar Morris salesroom, to enable women who work during the day to attend the cooking schools.

For the night sessions, advertising was done through the medium of mimeographed post cards.

KEROTEST 628
KEROTEST 630
KEROTEST 632
(Above) Type 630 for ⅞" or 1" O.D. Tube
Type 632 for 1⅜", O.D. Tube
Type 633 for 1½" or 1⅝" O.D. Tube
Type 634 for 2⅛" or 2⅝" O.D. Tube
Announcing
7 NEW, LARGE COMPRESSOR VALVES BY KEROTEST
Made to meet the requirements of the largest refrigerating and air conditioning systems
Type 455 for 1¼" pipe ammonia flanges
Type 456 for 1½" pipe ammonia flanges
KEROTEST 456
KEROTEST 455

Ever abreast of the advancing requirements of the industry, Kerotest presents 7 large valves primarily designed for use on large commercial and air conditioning unit compressors.

Types No. 628 and No. 630 are made of forged brass while types No. 632, 633 and No. 634 are made of forged steel making available Kerotest quality Compressor Valves up to 2⅝".

Forged Steel, in the larger valves, was selected by Kerotest engineers, after careful tests, as being the ideal material for compressor valves of this size.

Also illustrated are the new Kerotest Type 455 and 456 Diaphragm Packless Globe Valves in 1¼" and 1½" sizes, with four bolt hole, square ammonia type flanges . . . . generally used on large commercial and air conditioning installations.

Note the bolted, flanged-bonnet construction, which permits servicing these large valves while contained on the tubing lines without removing the valve from the line of service—an exclusive Kerotest feature, common to all Kerotest Diaphragm Packless Valves, and used extensively by one of the world's leading manufacturers of refrigeration systems.

Write for quotations and detailed particulars.

KEROTEST

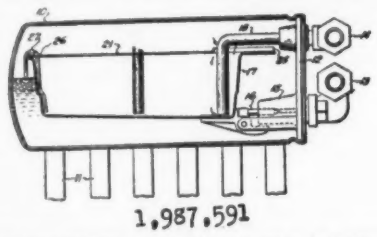
KEROTEST MANUFACTURING CO. . . . PITTSBURGH, PA.

PATENTS

Issued Jan. 15, 1935

1,987,591. OIL RETURN MEANS FOR FLOODED EVAPORATORS. Joseph Askin Buffalo, N. Y., assignor to Fedders Mfg. Co., Inc., Buffalo, N. Y. Application Oct. 13, 1932. Serial No. 637,607. 6 Claims. (Cl. 62—126.)

2. In a refrigeration apparatus comprising an evaporator having inlet means for admitting lubricant and refrigerant



1,987,591

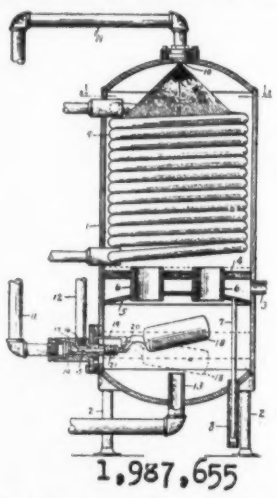
for separation by gravity therein, lubricant return means comprising a cup therein having an opening in its top, said top being above the liquid in the evaporator, means closing said opening, said means comprising a labyrinth structure adapted to gravitationally convey lubricant into said cup to permit evaporation of refrigerant carried with the lubricant during transit, and an outlet conduit entering the cavity of the cup and extending to a point exterior of the evaporator.

1,987,630. SEPARATION OF LIQUIDS FROM VAPORS OR GASES. William A. Myers, Springfield, Pa., assignor to The Atlantic Refining Co., Philadelphia, Pa., a corporation of Pennsylvania. Application Sept. 1, 1932. Serial No. 631,311. 8 Claims. (Cl. 183—12.)

2. Apparatus for removing entrained liquid from a moving stream of gas which comprises a passage for the gas, a filamentous mat of material so situated in said passage that gas in passing therethrough will impinge thereagainst, but situated so that the gas may pass thereabout, a trough for collecting liquid, located beneath said mat and associated therewith, means within said mat for directing liquid therefrom into said trough, and means for conducting liquid from said trough downwardly and out of contact with vapors passing around said mat.

1,987,655. ABSORBER FOR ABSORPTION REFRIGERATION PLANTS. Glenn F. Zellhoefer, Bloomington, Ill. Original application Jan. 12, 1933. Serial No. 651,306. Divided and this application Aug. 28, 1933. Serial No. 687,046. 3 Claims. (Cl. 261—122.)

1. An absorber for a non-intermittent absorption refrigeration plant comprising a chamber, means for spraying a solvent



1,987,655

through the top of the chamber, means for delivering a gaseous refrigerant into the chamber, a porous plate extending across the chamber above the point of entry of said gaseous refrigerant, through which the refrigerant must pass before being entrained in the solvent spray, means serving to maintain a layer of liquid solvent on said porous plate and for delivering the solution formed by the bubbling of the refrigerant through said liquid layer to the bottom of said chamber, and means for withdrawing the solution from the bottom of said chamber.

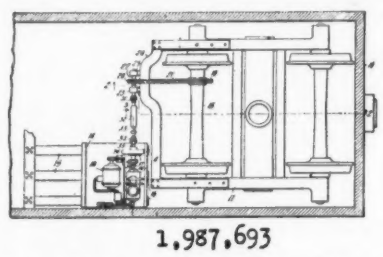
1,987,662. THERMAL SWITCH. Edward Bletz, Lexington, Ohio, assignor to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., a corporation of Pennsylvania. Application Oct. 6, 1933. Serial No. 692,495. 4 Claims. (Cl. 200—138.)

1. A temperature-limiting means for an electric energy-translating device, comprising a base, a fixed contact member on the base, a cooperating movable contact member, a snap-acting bi-metal disc supporting the movable contact member and having a greater temperature differential of operation than that to which it is to be subjected, a stud supporting the disc and having screw-threaded engagement with the base, an arm on the stud for turning the same to effect operation of the disc in one direction only and a spring for returning the stud to its initial position after movement thereof by the arm.

TEMPRITE
Instantaneous Cooling
"The leading cooler for water, beer and other beverages"
Write for Catalog
Temprite Products Corporation
(Formerly Liquid Cooler Corporation)
1349 Milwaukee Ave. East Detroit

1,987,693. REFRIGERATOR CAR. Otto Luhr, deceased, late of Chicago, Ill., by Anna Eisemann, executrix, Chicago, Ill.; said Luhr assignor to Anna Eisemann, Chicago, Ill. Original application Dec. 13, 1929. Serial No. 413,713. Patent No. 1,958,794, May 15, 1934. Divided and this application Feb. 15, 1934. Serial No. 711,314. 6 Claims. (Cl. 105—102.)

1. In combination, a railroad car body, a railroad car truck pivotally connected thereto, a split sprocket rigidly mounted

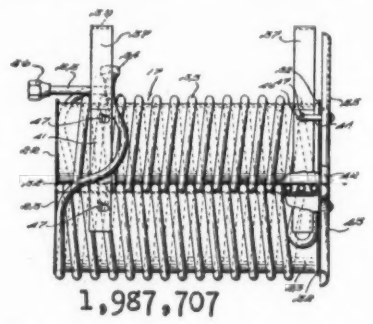


1,987,693

on a wheel axle adjacent a wheel, a sprocket mounted on the truck frame, operative means connecting said sprockets, mechanism carried on the underside of the car adjacent the side remote from said sprockets, and a propeller shaft extending transversely of the car connecting said mechanism to the second said sprocket.

1,987,707. FREEZING COIL. John R. Replogle, Detroit, Mich., assignor, by mesne assignments, to Copeland Refrigeration Corp., Mount Clemens, Mich., a corporation of Michigan. Application Oct. 12, 1931. Serial No. 568,269. 6 Claims. (Cl. 62—126.)

4. A refrigerant evaporator including a pair of superimposed parallel shells, a refrigerant conduit in the form of a



1,987,707

thread wound about each of said shells, the lower portion of the upper of said conduits and the upper portion of the lower of said conduits contacting both the bottom of the upper of said shells and the top of the lower of said shells.

1,987,708. REFRIGERATING MECHANISM. John R. Replogle, Detroit, Mich., assignor to Copeland Refrigeration Corp., a corporation of Michigan. Application March 15, 1934. Serial No. 715,601. 6 Claims. (Cl. 62—115.)

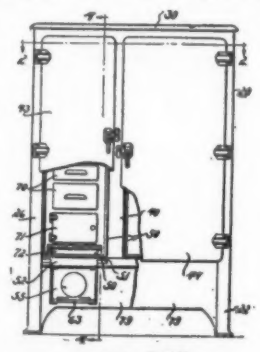
1. In combination, a vibratable device, a substantially non-vibratable device, a fluid connection between said devices, said connection having a natural period of vibration within a range audible to the human ear, and a mass secured to said connection intermediate the ends thereof modifying said natural period of vibration thereof to a frequency outside of the range of vibrations audible to the human ear.

1,987,725. THERMAL MOTOR PROTECTIVE DEVICE. Cyril G. Veinott, Springfield, Mass., assignor to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., a corporation of Pennsylvania. Application Oct. 6, 1933. Serial No. 692,509. 9 Claims. (Cl. 172—279.)

1. A protective device in combination with a repulsion-induction motor having a stator winding and a rotor winding, said device including circuit-controlling contact members in the stator winding circuit, a thermally-actuable member controlling said contact members and directly affected by the temperature of the stator winding, means for heating said thermally-actuable member in direct accordance with the starting current in the rotor winding, and automatic means rendering said heating means ineffective at a predetermined motor speed.

1,987,783. REFRIGERATING APPARATUS. George W. Mason, Detroit, Mich., assignor to Kelvinator Corp., Detroit, Mich., a corporation of Michigan. Application May 11, 1932. Serial No. 610,631. 1 Claim. (Cl. 62—116.)

Refrigerating apparatus comprising, in combination, a cabinet having a food compartment provided with an opening in the



1,987,783

front wall thereof and a horizontally disposed bottom wall, including a removable section, movable closure means for said opening, a cooling element within said compartment and removable through said opening, a condensing element depending from said removable section of the bottom wall and in close proximity thereto, an outer stationary supporting casing for the apparatus, including integral legs and integral portions extending downwardly from the bottom wall of the food compartment to a point substantially midway between said bottom wall and the lowermost portions of said legs and below said condensing element to provide walls of a machine compartment for shielding said condensing element without obstructing the free passage of air about said element, and a downwardly extending removable portion in the front of the cabinet to cooperate with said integral portions to shield the condensing element and to seal the forward edge of said horizontal wall including said movable section whereby said cooling element, condensing element and removable section may be horizontally removable as a unitary structure from said cabinet, including said food and machine compartments.

1,987,792. REFRIGERATING APPARATUS. Lawrence A. Philipp, Detroit, Mich., assignor to Kelvinator Corp., Detroit, Mich., a corporation of Michigan. Application May 3, 1932. Serial No. 608,942. 3 Claims. (Cl. 62—116.)

1. Refrigerating apparatus comprising, in combination, a cabinet having substantially rectangular side walls and a removable stepped wall structure forming the upper part of the cabinet, said removable wall structure being removable upwardly from the cabinet and including an upright insulated wall extending across at least a portion of the cabinet between the front and rear walls thereof, a horizontally disposed insulated portion extending from said upright wall toward the front of the cabinet, and a horizontally disposed, insulated portion extending from said upright wall toward the rear of the cabinet, said forwardly extending portion forming at least a portion of the top wall of the cabinet, a refrigerant cooling element disposed immediately below said forwardly extending portion, a refrigerant condensing element mounted on the upper part of said rearwardly extending portion on substantially the same horizontal plane as said evaporating element and below said forwardly extending portion, conduits interconnecting said elements, and a cover associated with said removable wall structure and cooperating with said rectangular side walls to enclose said condensing element, said elements wall and wall structure being removable as a unit without disconnecting the conduits from said elements.

1,987,793. REFRIGERATING APPARATUS. Lawrence A. Philipp, Detroit, Mich., assignor to Kelvinator Corp., Detroit, Mich., a corporation of Michigan. Application June 8, 1932. Serial No. 616,053. 1 Claim. (Cl. 62—116.)

Refrigerating apparatus comprising in combination, a cabinet having a food compartment formed by insulating walls, including a fixed wall covering a top front portion of the compartment, side walls stepped down at the rear edge of the top portion and a rear wall having its top edge flush with the lower stepped portions of said side walls, said lower stepped portions providing parallel spaced apart supporting walls on the same horizontal plane, an outer casing enclosing said walls and extending above said lower stepped portions to a point substantially in alignment with said top portion, removable wall means having an upright portion and a horizontal portion cooperating with the edges of the top, lower stepped parallel spaced portions and rear wall to seal said compartment from the outer atmosphere and being arranged to cooperate with said outer casing to provide a machine compartment, a refrigerant cooling element positioned in said food compartment immediately below said top portion, and a condensing element carried by said removable wall means in said machine compartment, said elements and said means being bodily removable as a unitary structure from the rear of said cabinet.

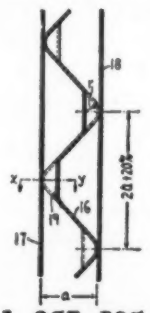
1,987,796. REFRIGERATING SHOW CASE. Charles E. Rorrer and Albert R. Mitterer, Denver, Colo., assignors to Stadium Stores, Inc., Denver, Colo. Application March 26, 1929. Serial No. 349,965. 14 Claims. (Cl. 312—117.)

3. A show case having a compartment for the storage of merchandise, and provided with transparent doors in the front wall thereof for the display and removal of merchandise from said compartment, said compartment having a sloping top portion for the display of additional merchandise, the remainder of said top lying in a substantially horizontal plane at the base of the sloped portion, a slide extending along the sloping portion above said doors, on said horizontal portion and adapted for the sliding support of the merchandise, and a weighing scale having a platform aligned with and substantially abutting the slide and forming a continuation of said slide.

1,987,797. REFRIGERATING SHOW CASE. Charles E. Rorrer and Albert R. Mitterer, Denver, Colo., assignors to Stadium Stores, Inc., Denver, Colo. Application Feb. 23, 1932. Serial No. 594,517. 9 Claims. (Cl. 312—128.)

2. In a show case, a slanting bin at the top thereof, a rack in the bin effective to space merchandise therein from the bottom of the same, and an adjustable transverse partition, and means selectively adaptable to the support of said rack or said partition, said means being constructed to support the rack at different predetermined elevations above and in substantially parallel relation to the bottom.

1,987,798. THERMAL INSULATING MATERIAL. Siegfried Ruppricht, New York,



1,987,798

N. Y. Application May 19, 1931. Serial No. 538,502. 6 Claims. (Cl. 154—45.)

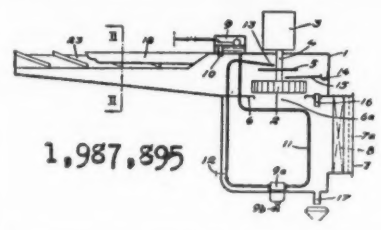
1. An insulator comprising a thin metallic sheet formed in a predetermined wave pattern in which the distance between adjacent peaks of the wave is equal to approximately twice the height of the pattern plus 20 per cent of said height.

1,987,881. WATER COOLER. Henry E. von Seggern and Ernest A. von Seggern, Escondido, Calif. Application June 29, 1932. Serial No. 619,898. 11 Claims. (Cl. 261—112.)

1. In a water cooler, a plurality of vertically arranged parallel disposed water spreading plates forming spaces therebetween for the circulation of air streams, said water spreading plates provided with recesses in their upper edges, a plurality of water distributing troughs positioned in said recesses and extending transversely across the water spreading plates(said water distributing troughs provided with notches disposed so as to register with the upper edges of said water spreading plates so as to discharge a multiplicity of water streams thereon whereby said water streams divide and flow down the surfaces of said water spreading plates, said water spreading plates including means tending to spread said water streams laterally whereby said water streams unite to form films coating the surfaces of said water spreading plates.

1,987,895. AIR HUMIDIFYING APPARATUS. Seth Mauritz Fingal Engdahl, Stockholm, Sweden. Application June 14, 1933. Serial No. 675,747. In Sweden June 23, 1932. 7 Claims. (Cl. 261—89.)

1. An air humidifying apparatus comprising a casing, at least one fan in said casing for creating a current of air, means



1,987,895

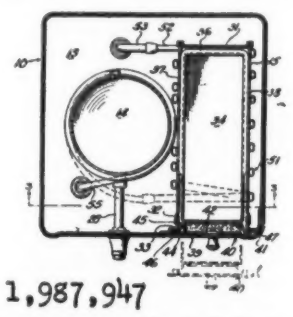
for supplying liquid to said fan so that the liquid is spread by centrifugal force, and a surface below said fan for collecting surplus liquid spread by the fan but not absorbed by the air, said surface being formed with a suction opening for air, and said surface being so disposed relative to said fan that said surplus liquid is reintroduced into the air current by passing directly from the collecting surface to the fan.

1,987,917. REFRIGERATED TANK. Frederick G. Thwaits, Wauwatosa, Wis., assignor to The Heil Co., Milwaukee, Wis., a corporation of Wisconsin. Application Feb. 4, 1933. Serial No. 655, 164. 4 Claims. (Cl. 257—192.)

1. A cooling tank for fluids, comprising an inner metallic tank, an insulating jacket surrounding the tank and closing the ends thereof and spaced from the sides of the tank to provide a fluid space, there being a non-corrosive fluid within said space, the jacket being formed with an enclosed upped offset providing a coil chamber, a refrigerant containing coils removably disposed within said chamber, and means for circulating the fluid adjacent the coils and around the tank.

1,987,947. BEVERAGE DISPENSER. Lawrence C. Smith, Kenmore, N. Y., assignor to Fedders Mfg. Co., Inc., Buffalo, N. Y. Application June 3, 1933. Serial No. 674,231. 1 Claim. (Cl. 62—141.)

A cooling device comprising a cabinet having a portion formed to provide a rectilinear chamber having an enlarged

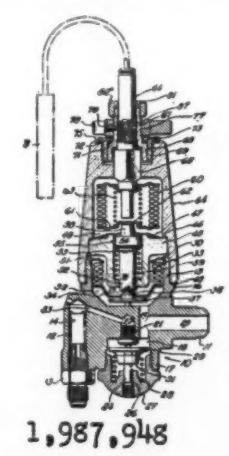


1,987,947

opening through a side wall thereof, an annular drawer frame secured to the interior face of said wall and extending around the opening, said frame having an axially extending annular flange, a tube closed on one end and having its open end engaged over said flange and secured thereto, a drawer slidably mounted in said tube, an insulated drawer front secured to said drawer and adapted to engage said frame, a cooling coil disposed about said tube, and insulation means between the walls of the tube and the walls of the chamber.

1,987,948. REFRIGERANT CONTROL DEVICE. Lawrence C. Smith, Kenmore, N. Y., assignor to Fedders Mfg. Co., Inc., Buffalo, N. Y. Application Aug. 1, 1933. Serial No. 683,146. 4 Claims. (Cl. 236—92.)

1. In a refrigerant control device, a body, a valve therein, a sealing bellows mounted in the body and operable to



1,987,948

actuate said valve, a thermostatic bellows responsive to temperature conditions, a housing secured to the body and enclosing both of said bellows, a wall in the housing thermally separating the bellows, said wall being formed with a bore and a counterbore, a rod extending through the wall and connecting the bellows, said rod being formed with a head slidably mounted in the counterbore of the wall and a stem extending through the bore thereof, a spring mounted in the counterbore of the body and engaging the head of said rod to urge it towards said thermostatic bellows, and adjustable means on said housing for compressing said bellows against the resistance of said spring pressed rod.

1,988,076. CONDITIONING UNIT. Walter L. Fleisher, New York, N. Y. Application June 18, 1931. Serial No. 545,170. 5 Claims. (Cl. 261—15.)

1. A conditioning unit including a basin adapted to receive a liquid, means for inducing the flow of air adjacent the same, a power shaft, a pump structure coupled to said power shaft and including a spirally disposed tube having its lower end extending into said basin and a screen unit encircling said tube and disposed within said basin.

1,988,117. FLEXIBLE METAL FREEZING TRAY. Harvey D. Geyer, Dayton, Ohio, assignor, by mesne assignments, to General Motors Corp., Detroit, Mich., a corporation of Delaware. Application Feb. 16, 1933. Serial No. 656,990. 8 Claims. (Cl. 62—108.5.)

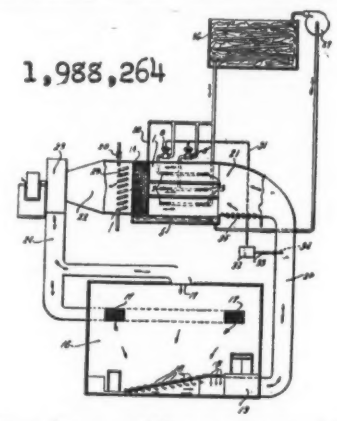
4. A flexible freezing tray comprising a sheet metal container having a row of ice pockets, said tray having a series of inwardly extending open folds formed in the walls thereof and extending in a plane substantially transverse the length of said row of pockets, said open folds extending entirely through the upper edges of the tray walls and thereby providing a series of continuous lines of relatively easy flexure transversely of the tray.

1,988,214. REFRIGERATION APPARATUS. Reford L. Page, Binghamton, N. Y., assignor of 33⅓ per cent to Lee E. Herrick, Binghamton, N. Y. Application April 19, 1933. Serial No. 666,852. 8 Claims. (Cl. 62—114.)

1. A refrigerating apparatus comprising an outer receptacle, a container therein for receiving material to be refrigerated, a refrigerant between the inner walls of said receptacle and said container, and a material between said refrigerant and said container having a freezing point lower than that of water.

1,988,264. METHOD OF AIR CONDITIONING. Thomas Chester, Pittsburgh, Pa. Original application Jan. 30, 1928. Serial No. 250,489. Divided and this application Jan. 22, 1931. Serial No. 510,349. 11 Claims. (Cl. 261—115.)

1. The method of cooling and ventilating an enclosure comprising providing a recirculating stream of air from and to

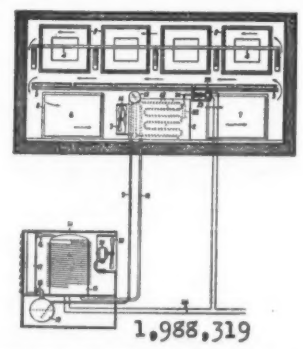


1,988,264

said enclosure, adding a stream of fresh air to said recirculating stream, and thereafter modifying the dew point of the fresh air portion of the united stream more than the mean dewpoint of the united stream is modified.

1,988,319. FOOD PRESERVATION. Ralph E. King, Fort Wayne, Ind., assignor to General Electric Co., a corporation of New York. Application Feb. 27, 1932. Serial No. 595,552. 14 Claims. (Cl. 62—171.)

2. The method of operating a refrigerator in which the food storage cabinet is cooled by circulating air over a cooling



1,988,319

element and through said cabinet which comprises maintaining the temperature of the cooling element sufficiently close to the temperature of the air in said cabinet to produce a relative humidity of the air in said cabinet of from 80 to 85 per cent.

REISSUE

19,423. ROTARY COMPRESSOR. John C. Buchanan and Earl F. Hubacker, Detroit, Mich., assignors to Norge Corp., Detroit, Mich., a corporation of Michigan. Original No. 1,913,657, dated June 13, 1933. Serial No. 436,282, March 17, 1930. Application for reissue Aug. 20, 1934. Serial No. 740,702. 4 Claims. (Cl. 230—149.)

1. A rotary pump comprising an open-ended cylinder having a concentric annular outstanding flange on each end thereof providing for air cooling of the cylinder, longitudinally extending end closure housings for said cylinder secured concentrically on said flanges, shaft bearings in said housings, a shaft journaled in said bearings carrying an eccentric housed within said cylinder, a rotor on said eccentric in pumping relation to said cylinder, end sealing members in said housings secured stationary to said flanges and in sealing contact with the ends of said rotor, one of said closure housings providing a reservoir for lubricant to normally extend above the working level of said rotor, and being provided with a discharge outlet for the working fluid, and conduit means for leading the discharge of working fluid and lubricant from said cylinder through an end seal in said last-named housing.

AIR CONDITIONING

Carrier Dealers Tell How They Sell Air Conditioning

Specialty Selling Setups, Cooled Display Rooms, & Enthusiastic Users Boost Sales

By George F. Taubeneck

NEWARK—When 100 of the country's best air-conditioning dealers gathered at the plant of the Carrier Engineering Corp. here for a two-day sales meeting, experiences during their first year as dealers in this new business were swapped freely. For their mutual benefit these dealers told each other how they had done it.

A surprisingly large number of these dealers made money on air-conditioning sales in 1934. And all of them enjoyed a bigger volume than they had expected.

In each case the dealer had to work out his own pattern and his blueprint. Nobody could tell him how to sell his air-conditioning equipment, for apparently nobody knew—the industry's total sales figure for previous years had been discouragingly small, despite all the attendant ballyhoo.

Recorded here in detail are some of the experiences which a few of these dealers had last year—how they sold, how they installed, what they learned. These experiences are set down simply, just as they were told by the dealers themselves, for the benefit of all dealers who may attempt to sell air conditioning in 1935.

McCrea Explains His Specialty Selling Setup

C. L. McCrea, manager of the air-conditioning division of the National Electrical Supply Co., Washington, D. C., distributor of General Electric, Carrier, and Gar Wood products, relates that although there are a few basic principles which have pulled him through 14 years of specialty selling, he does not believe in any magic formula for success. Good old common sense, putting two and two together to make four, will solve most of our troubles, he asserts.

Second, he thinks problems are often difficult because we look upon them as a whole, and do not break them down into a succession of simple stages. The things that are difficult are the things that are not clearly understood. Problems that seem complex and beyond solution become easy when we break them up into little bits and solve them separately.

Simple When Analyzed

"I am reminded in this connection," he says, "of my first experience with automobile machinery. I marvelled at a break-making machine. But the instructor proceeded to explain. He showed how the machine performed several simple steps, and the simple mechanism for each one. Then he showed how a single drum tied all of these functions together, made them operate in proper sequence, and kept them in perfect harmony.

"It seems to me that organizing and operating this air-conditioning business is much the same. Instead of dealing with brass and iron we deal with men, work, and money. We deal with principles. I have always used four key words, or principles, to cover the building of a business. They are: analyse, organize, deputize, and supervise.

"First, let's *analyze* this air-conditioning business," suggests Mr. McCrea, getting down to cases. "What do we mean by analyze? We mean taking a good look at the problem as a whole—this problem of organizing and operating—and then breaking it down into little simple pieces or steps and studying each one individually.

"And because this is the foundation of all our work—the base on which the success of our life work is to rest—we can't be too critical of it or ourselves. A few hours of analytical thought here will save many failures—many heartaches—many losses.

"I can truthfully say that most of the times when I have stubbed my toe and fallen, retrospection has shown lack of some preliminary analysis.

Analyze Problem Thoroughly

"Let us squarely face the fact that this is a fast money business. It is a sales business primarily, and don't let us ever lose sight of that fact. We are not manufacturers, but sales people whose job it is to sell and install equipment that is made for us.

"Particular emphasis attaches to this point, for I have never known the time when there wasn't some job or two that needed something just a little different, just a little special, and if only we had that not-in-the-catalog material, what a wonderful job we believe we could do.

"A firm conception of the thought that we are *salesmen* gives us the backbone necessary to turn down such business, and believe me it takes backbone.

"And, in addition to being strictly a sales business, it's a one-time per-customer business. You either get the order or you don't. There's no halfway about it. Repeat sales on air conditioning are few and far between. You must get the order on the first offense.

"The average customer buys the products we sell only once in a period of years. This is distinctly different from many other types of business. The clothing merchant for example, sells you three or four suits a year for many years.

"A food market can exist on the trade of 200 families because 200 families spending $10 weekly for food will create a business of over $100,000 a year. If a family takes a two-weeks' vacation, they'll be back two weeks later for more food. If you take a two-weeks' vacation, your competitors get your business, and you're out.

Type of Men Needed

"With this analysis definitely in mind, the type of organization you must build becomes clearly evident," he continues.

"For example: You know that for this type of work, where your contact is with the head men, your salesman must be of the type that can get the business by sheer ability. It causes you to select and train an engineer who can get the right answer the first time. It allows of no temporizing with installations and service.

"You ask and answer for yourself: How much business can be done? Where am I to get this business? How much personnel must I have to do the job? What sales personnel is necessary? What engineering personnel is necessary? What space is required? What inventory is required? How much cash to operate? How can I finance deferred payments? What service and maintenance personnel must be available? And so on.

Study of Products

"Let's take the study of sales and potentials. You have a line of products to sell. Break them down into their separate fields."

Which he did, as follows:

1. Product cooling for meat stores, food shops of all kinds, and the many other fields, i.e., fur shops, ice cream stores, etc.
2. Air cooling and conditioning equipment for larger stores, etc.
3. Air cooling and conditioning equipment for smaller stores, etc.
4. Air cooling and conditioning equipment for offices and homes.
5. Unit heater business.

"Take sheets of paper," suggests Mr. McCrea, "lay them out on a drafting board, and chart these products and their fields of application. Now study the possibilities of each. Analyze each class of business to see just how many places, how much business there really is in your community.

"Break down the application of each class of product into definite avenues of attack. Then you'll know where you are going. If this job is well done, you will seldom be in that sad position when you see someone's else installation sign going up on a job that you didn't even know existed because you had overlooked it.

Geographic Prospect File

"In our organization it has been shown that we progress best by building a geographical file of our entire territory. In another six months we shall have covered about 99 per cent of our entire territory on a systematic canvass basis, and then we'll know where the prospects are.

"What we have already finished gives us plenty to work on and to organize our salesmen's work.

"Much of our difficulty is connected with installation. Water is difficult to obtain in many office buildings, 220-volt power is extremely difficult, and the installation cost in many cases is terrific.

"But, in a rough analysis of Washington, D. C., we have just made, we find dozens of places where the office is on the ground floor, with a basement underneath. There are many homes in which cooling in the living room and bedroom can be installed easily by going up from the basement and through a closet or inexpensively decorated space. Thus a good installation can be made at a low cost.

"But it is not enough to be able to do the job. The customer must have a good business or a good income to be able to afford it. So this study of ours has narrowed the field down to a comparatively small number of prospects—and we're going after this business.

"If our competitors want to shoot all over the lot, all right, let them. We're after 1935 business, not 1936 or 1937 prospects. So for 1935, our policy is to pass up the difficult jobs, and the jobs where the customer wants something real cheap.

"Let our competitors have them—if they can get them—we'll concentrate on those where we can do a good job at a profit," smiles this super-salesman from Washington, D. C.

Organizing Operation

Having a birdseye view of our business—having a knowledge of the facts from a first-hand analysis as applied to the particular territory, knowing what we want to do and where we are going, we began to build our second step—to organize, he continues.

"I love this business because it is a business of men. A sales organization is not a lot of machines automatically grinding out a product day after day, such as a cotton mill, where endless lines of steel looms start with one whistle and stop with another, but of flesh and blood.

"Remember, too, that these men—your organization—represent you with your customers. You can inspect a piece of cotton cloth to make sure it is perfect and then mail it to the customer, confident of his satisfaction. You can't do that in this business. You can't be present at every sales interview.

"The customer judges you by your men—whether salesmen, mechanics, or servicemen. Your reputation, your business, all the success of your plans, is literally in the hands of your men. If you have chosen them wisely, they reflect credit upon you. If you have trained them well, they in turn bear this evidence to your customer.

"I say truly that there is no business today in which there is a greater mutual tie between employee and employer than in this specialty merchandising business of ours.

"I emphasize the word 'mutual' because we take for granted the fact that an employee should be straightforward, energetic, truthful, and honest, and sometimes overlook the fact that as we, the employers, set the example in all such matters, so does the employee reflect our personalities in his contact with your customers."

Getting and training top-notch salesmen is of utmost importance he believes.

"There are many ways of contacting prospective salesmen. In my opinion, honest, straightforward advertising is as good as any," he advises. "Write your ads to set out the opportunity fairly, and they will ring true. You don't believe in fairy tales; so don't expect the prospective salesman to do so. If he did, you wouldn't want him.

"When you talk with a salesman, lay your cards right on the table; and his response and questions will show more clearly his suitability to you in this business. Just as you react favorably to good straightforward facts and honest words, so will he; and when your two minds agree as to the possibilities, the prospective salesman will be just as willing to come with as you yourself were to get into the business.

Train and Advise Salesmen

"Don't gamble on a salesman of doubtful qualifications. You can't afford to, because a poor salesman ruins good customers for you. Having selected—back him with proper training and advice. Don't turn him loose to sink or swim.

"Every man that fails is as much my failure as his. I selected him. I thought he had the stuff to make good. I trained him. I sent him out to battle with prospects, to bring back orders.

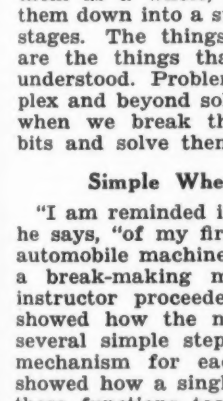
"On a commission basis, if they really can make money, they'll drive themselves a whole lot harder than you would drive them, if they're the right sort. The real salesman prefers to work on a commission basis.

"I believe firmly in paying salesmen a percentage of the gross profit on a sliding scale. First of all, don't fool

(*Continued on Page 16, Column 1*)

BARE COMPRESSORS
FOR ASSEMBLERS AND SERVICE REPLACEMENT

M&E



Precision made, and of the same approved design and construction that have made the "M&E" complete line famous from coast to coast for efficiency and durability. Ninth Successful Year!

Write For Complete Catalog

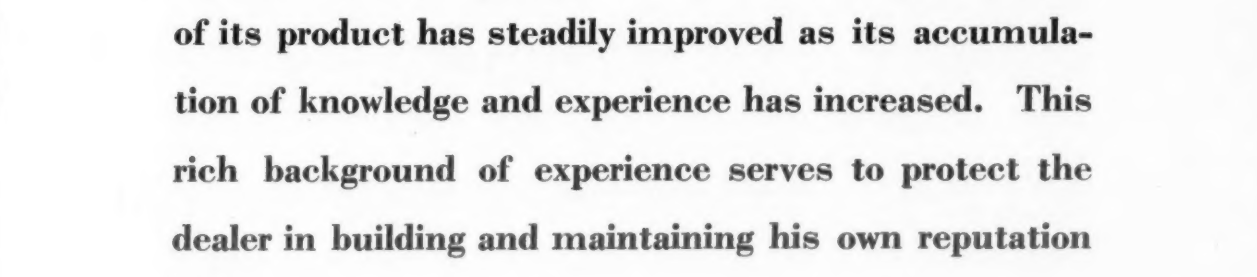
MERCHANT & EVANS CO.
MANUFACTURERS
PHILADELPHIA
EST. 1866 – *Plant:* LANCASTER, PA

PRESTIGE

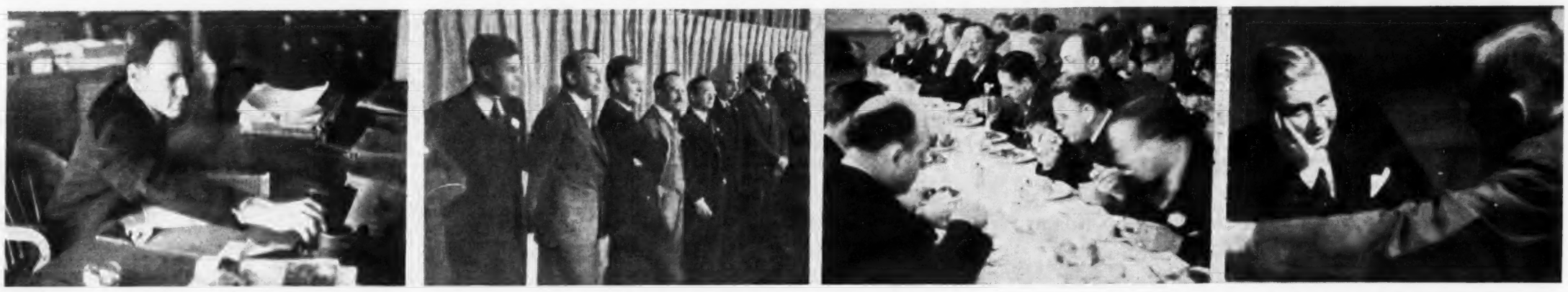
For more than a decade, Servel has been earning its reputation as a builder of outstanding Commercial Refrigeration equipment. Year after year, the quality of its product has steadily improved as its accumulation of knowledge and experience has increased. This rich background of experience serves to protect the dealer in building and maintaining his own reputation locally.

SERVEL
COMMERCIAL REFRIGERATION
SERVEL, INC. *Commercial Refrigeration Division* EVANSVILLE, IND.

This great modern 30-acre plant is the home of Servel Commercial Refrigeration and the world-famous Electrolux, the Servel Gas Refrigerator



Carrier Dealers Swap Selling Ideas at Air-Conditioning Conference



(1) Brewster S. Beach, advertising manager of Carrier Corp., crushes out a cigarette before leaving his desk to address the assembled Carrier dealers. (2) Chairman Bickel lines up his field men for applause. Above you see a group composed of Bob Miller, Chicago; Morris Firestone, Philadelphia; Bill Carpenter, New York City; Leslie Foley, Cleveland; Charles Wittmer, Texas; Jim Shea, California; Robert Robertson, New York City; and Mel Reed. (3) Dave Trilling, Philadelphia dealer for Carrier, took a prominent part in the discussions. Here he may be seen (second from the right) zupping soup. (4) Relaxing after a full meal.

(1) Dealer Ray Harten of Harten-Knodel, Cincinnati, stoops to whisper something in Carrier Salesmanager Jack Bickel's ear. (2) Mr. Bickel (right) enjoys a steaming hot cup of coffee. (3) The luncheon was good, but (4) three of the dealers chose to "sit it out" so that they could figure discounts, prices, and terms.

McCrea Explains Theories in Setting Up Specialty Appliance Operation

(*Continued from Page 15, Column 5*)

yourself that you can keep secrets from a sales organization. Any salesman bright enough to be the man you want to represent you, knows nearly as much about the facts of your business as you do. In our organization, our salesmen know our estimated cost on every job, and how it is arrived at."

Deputize Is Next Step

Mr. McCrea proceeds to the third step in his four-point program. Having organized, he deputizes.

"Give each man a clear conception of what his job covers," he advises. "If you have analyzed correctly—if you have organized well—this isn't a difficult task. Tell him clearly what you expect of him. Take him into your confidence by giving him your viewpoint of this business. If you believe in it, so will he.

"Let your key men clearly understand each other's functions. In those positions where it is impossible to compensate on a commission basis, pay whatever you think is fair for the work, and then set up in your budget a small sum with which to pay a bonus at the end of the year, if you made some money, and tell the man about the bonus possibility.

"Think back to the days when you, yourself, worked for a wage—when an extra two dollars in the pay envelope on Saturday night was a lot of extra money, and a whole hundred dollars extra was real affluence, and you'll appreciate how that installation foreman or other man will work for that extra money—and earn it."

And now, having analyzed, organized, and deputized, Mr. McCrea is ready to supervise.

"So far we have reasoned that this business of ours is a different type of business," he reminds you. "And, so is the supervision different. Your organization brings their problems to you. Continually you are checking their work with them. You push for results. You drive for business. You watch expenses. You organize contests. You push up sales volume.

"When the men get into a tough deal, go with them to show them how to close it. Your organization learns from first-hand experience that you never ask them to tackle a job that you aren't willing to tackle yourself.

"When they learn that you really know the business, and haven't just read it out of a book—that you're there in the front line trenches when there's a fight on—you'll be surprised at the confidence they'll have in what you tell them. Above all, they'll communicate this to their prospect and they'll bring in the orders.

"Very confidentially, however, you certainly are on the spot when you go out on such a deal. If ever you burn your bridges behind you—that's the time.

Supervise Installations

"Above all, supervise installations. Make sure they're right. Particularly in the early stages of the business you must watch them carefully; and then supervise the service you give them. You can't afford to do an unsatisfactory job. Don't ever take an order unless you believe it will give complete satisfaction; and if you do stumble, as you will once in a while—clean up the difficulties quickly.

"It doesn't take long for even the slightest error to become known; and immediately your shortcomings get into the sales manual of your competitors.

"I've found from experience that enthusiasm—the most valuable asset of a sales organization—works from the top down, and not from the bottom up," concludes Mr. McCrea. "That enthusiasm, or the lack of it, is the most contagious thing in the world. If I'm really enthusiastic, others catch that enthusiasm; they build it up; and pretty soon we all have religion like a negro camp meeting. If I'm not sold, if I'm not enthusiastic, it travels from one to the other like a cold in a kissing family."

Trilling Constructing Conditioned Salesroom

Dave Trilling of Trilling & Montague in Philadelphia, newest Carrier dealer, was one of the leading lights of the dealer forum. President of the Radio Wholesalers' Association and vice chairman of the Radio Wholesale Code Authority, Mr. Trilling is a nationally known figure in the specialty merchandising business.

"About two years ago," began Mr. Trilling, "we took on oil burners. We felt that between oil burners and air conditioning that we could make a tie-up in the form of an organization that could function and make money.

Contracting Business

"What I like about the air-conditioning business is this: It is a sort of contracting business, and necessarily a retail business, and not a distributing business; and if there is anything I have against the wholesale business it is the fact that I depend upon someone else to do a job for me.

"I find that when it is easy to sell a product, dealers will sell it, but when it is hard to sell, dealers will sit in their offices for six months waiting for the season to turn around before they start something again.

"That burns me up, because I am not the kind of a fellow that likes to sit around and do nothing.

"So then you come to some of these dealers and give them some fine suggestions. You find that the efficient one will take hold of it, but you get a job from a selected few.

"In fact, 80 per cent of your volume comes from 20 per cent of your dealers, and about 80 per cent of your dealers give you the other 20 per cent of your volume."

New Methods Needed

For the large part, Mr. Trilling observed parenthetically, most oil burner merchandising has been somewhat obsolete, and new methods are needed to steam up that business.

"When the Carrier people made up their mind to give up their branch in Philadelphia, and I saw an opportunity to get that franchise," he continued, "I let them know I would like to have it.

"Boy, what an investigation those babies gave me. You would think they were investigating an account involving a million dollars' worth of credit. Happily, after a great deal of investigation, they let us have the franchise.

"Well, I feel that both of us can be congratulated. After we took on the franchise, Carrier stock went up!"

Merchandising air conditioning, Mr. Trilling insisted, is something that lends itself to a lot of romance and dramatization.

Equipping New Salesroom

"We are equipping new headquarters," went on the Philadelphia distributor, "and we are fixing up an organization to handle ABC oil burners in one side of the house, and an exclusive Carrier comfort cooling organization on the other side.

"In setting up this department, we are putting up a very nice display room; and we are putting in about 20 tons of refrigeration, in order that we may have a show place in Philadelphia, to display what we really have to sell in comfort cooling.

"These air-conditioned departments will have a separate entrance, so that the boys can come in and work as late as they want at night, and bring their customers in after dark if they see fit, so that there is nothing to hamper their progress.

Operations Divorced

"This operation will be totally divorced from our wholesale business. I have been told that one of the pitfalls is proper engineering, so I am leaving Carrier to guide us in that direction. We are merchandisers, not engineers—and know enough to know what we don't know.

"Our function will be to merchandise comfort cooling, and that is something I expect to give my share of attention to, because I like to exploit something that has merit, something that you can show.

"I should like, on a hot summer day, to bring prospects into a conference room and let them feel the difference, as well as seeing something that shows progress toward cleanliness and health."

Mr. Trilling paused, wiped off his glasses, and proceeded dramatically:

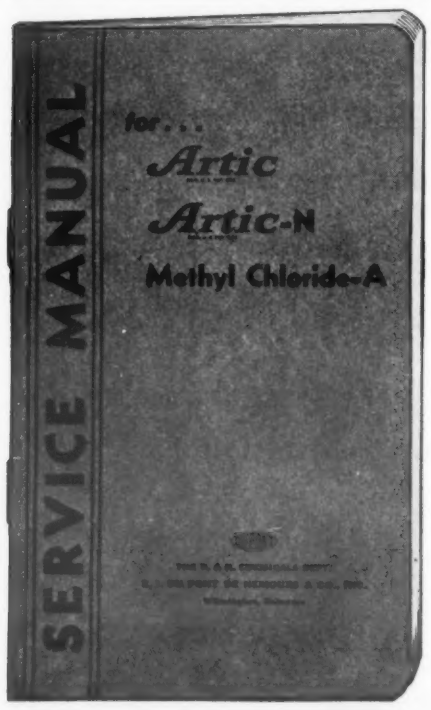
"To the dealers I would like to say this: I notice among you some faces that I have known for some time, as well as a great many faces that I have never seen before. We're all in the same boat.

"We have a responsibility to the Carrier Corp., and I think our responsibility is how to go out and get this business and get the volume that they need, to make money.

"They have struggled along with this proposition for many years; they were fortunate that there was a boom a few years ago that gave them a chance to come up in the world, but pioneering comes at a very high cost in any industry, and in most cases pioneers drop out because they can't stand the gaff.

"What we would like to do here as dealers is to demonstrate to the factory that we are the right type of a set-up, and that they are sound in

(*Continued on Page 17, Column 1*)



New ARTIC* Service Manual

Gives information on properties, handling, transferring and other phases of ARTIC service work.

•

A 32-page pocket-size book

•

GET YOUR COPY from one of these ARTIC service distributors:

CALIFORNIA
El Monte
The Pacific R & H Chemical Corp.
San Francisco
The R. & H. Chemicals Dept.
E. I. du Pont de Nemours & Co., Inc., 601 Third St.

COLORADO
Denver
Denver Fire Clay Co.

ILLINOIS
Chicago
Chemical Distributors, Inc.
365 E. Illinois St.

INDIANA
Indianapolis
Wm. Lynn Chemical Co.

LOUISIANA
New Orleans
Enochs Sales Co., 813 Poydras St.

MARYLAND
Baltimore
Maryland Chemical Co.
Bayard and Russell Sts.

MASSACHUSETTS
Boston
National Ammonia Co., Inc.
140 Federal St.

MICHIGAN
Detroit
Eaton-Clark Co., 1490 Franklin St.
(Overnight truck deliveries to all important Michigan communities)

MISSOURI
Kansas City
G. S. Robins & Co.
(At W. E. Murray Transfer & Storage Co.)
St. Louis
G. S. Robins & Co.
310–316 S. Commercial St.

NEW JERSEY
East Rutherford
Matheson Co.
Newark
National Ammonia Co., Inc.
(At National Oil & Supply Co., 172 Frelinghuysen Ave.)

NEW YORK
New York
National Ammonia Co., Inc.
350 Fifth Ave.
Niagara Falls
National Ammonia Co., Inc.
Buffalo Ave. and Chemical Road
White Plains
Matheson Co., 178 Martine Ave.

NORTH CAROLINA
Charlotte
The R. & H. Chemicals Dept.
E. I. du Pont de Nemours & Co., Inc., 300 W. First St.
Greensboro
Home Appliance Service Co.

OHIO
Cincinnati
The Merkel Bros. Co.
Burbank St. and C. L. & N. R. R.
Cleveland
The Cheney Chemical Co.
2929 E. 67th St.

OKLAHOMA
Oklahoma City
Hunzicker Bros. Co.
105–107 E. California St.
G. S. Robins & Co.
(At O. K. Trans. & Storage Co.)
Tulsa
G. S. Robins & Co.
(At Nichols Trans. & Storage Co.)

OREGON
Portland
L. H. Butcher Co., 175 N. 14th St.

PENNSYLVANIA
Philadelphia
National Ammonia Co., Inc.
Frankford Post Office
Pittsburgh
National Ammonia Co., Inc.
3939 Butler St.

TENNESSEE
Nashville
Nashville Machine & Supply Co.
123–135 Third Ave., N.

UTAH
Salt Lake City
Denver Fire Clay Co.

WASHINGTON
Seattle
L. H. Butcher Co.
1518 First Ave., S.

WISCONSIN
Milwaukee
Chemical Distributors, Inc.
(At Atlas Storage Co.
708 West Virginia St.)

*ARTIC is the registered trade name of Du Pont for its Methyl Chloride, especially manufactured for refrigeration purposes.

E. I. DU PONT DE NEMOURS & CO., INC.
THE R. & H. CHEMICALS DEPT. / WILMINGTON, DELAWARE

DU PONT

McCORD
REFRIGERATION
PRODUCTS

COMMERCIAL EVAPORATORS

DOMESTIC EVAPORATORS

CONDENSERS

METLFLEX ICE TRAYS

SPIRAL FINNED TUBING

SPIRAL COPPER FINNED IRON, STEEL OR COPPER PIPE

McCORD RADIATOR & MFG. CO.
DETROIT, MICH.

Hearman Says Air-Conditioned Display Room Closes Sales

(*Continued from Page 16, Column 5*)

choosing specialty dealers who are confined to an area that they can properly serve.

"If we hit this thing right, a year from now Carrier will really be making some money, and it will have been proved to them that their judgment is sound in spreading out to a wide dealer organization.

"Then they ought to be able to go out after 10 times as many dealers throughout the United States to get the proper coverage; and when they get that many dealers, they are really going to make big money, because then they can have volume.

"The year 1935 looks to me like the beginning of a series of years in which that curve which is beginning to turn upward again will go right straight up the line. If we all work fast to get firmly established and intrenched, we should make some money."

Abruptly changing the subject, Mr. Trilling turned to Sales Director Jack Bickel and said: "We appreciate the frankness with which this manufacturer speaks to us about his problems.

"Those of us who have been in the radio business know that this is rather an innovation to have people talk so frankly, because those radio fellows have a different idea of doing business.

Refrigerator Men Cooperate

"I would say that in domestic refrigeration we run into a better type of individuals; at least those fellows seem to be able to get together and decide it will be a good thing to cooperate so that they can all make money. It is not that way among radio manufacturers."

Concluded Mr. Trilling:

"We are still doing business with the people with whom we started out in the radio industry, after eight or nine years.

"The people we started out with in the domestic refrigeration business we are still with and have helped pioneer them for the past five years, and they are one of the coming top-notchers in their industry.

"Likewise in the oil burner business we have the fortune to do business with a pioneer in that business, and I believe they are going to come up because their policies are sound.

"I am entering this air-conditioning field with a feeling that I can go into it with both feet for a long pull, rather than a quick haul, and we are spending money accordingly, so that we will get it back in futures—not too distant futures, we hope."

Prospect Not Interested In Engineering—Hecht

William Hecht of the Montgomery Engineering Co., Jersey City, N. J., says there are three essentials to merchandising any item: (1) product; (2) organization; and (3) market.

"Divorce any one of those, one from the other two, and you cannot succeed," he said.

"I think I have a good organization. What concerns me, then, is the other two. To be frank with you, my engineering knowledge is greatly limited. Suffice it to say that I do know that the evaporative condenser is a good product. The main question is whether we have a market for it.

Too Much Engineering

"I do believe you should have a knowledge of engineering, but I find the main trouble is that the average salesman will walk in and talk engineering terms to the prospect," declared Mr. Hecht. "I think that is a grave mistake.

"He will get into a sales meeting in our office, and we will talk back pressures and head pressures and condensing temperatures and what not, and then he will walk out to see a meat merchant or fruit merchant or confectioner, and keep right on talking engineering terms. That's wrong.

"Head pressure to you may be a very, very simple phrase, but don't talk head pressure to prospects; they have no conception of what it is. Don't talk condensing temperatures to them; they don't understand.

"What I generally tell the prospect is: 'We have a refrigeration machine which does not depend upon air and does not depend upon water solely to cool the gas.'

"Although this might seem jocular to you, with some people you must be very careful how you use the term gas. Some merchants think all gas is illuminating gas. I have found it so.

A-b-c Language

"You have got to explain to them in a-b-c language that you are referring to a refrigerant which turns from a liquid to a gaseous state and back to a liquid state, and in order for it to liquefy, there must be some medium of cooling it.

"Up to the present time, we had no other medium of cooling this gas outside of the sole employment of either air or water. Now we have something entirely different.

"We don't depend upon air, and we don't depend upon water; we use a little of both, and liquefy this gas by means of evaporation.

"We give these prospects two forms of guarantees," went on Mr. Hecht. "I really don't think that I would be going against the regulation of any code authority by mentioning this.

"We give every customer the usual year's guarantee, but we also give them another guarantee, which is a moral guarantee.

"Since we have been in business, we have always given our customers the additional moral guarantee that if the product we install does not come up to the standard of what we say it will do, we don't expect them to keep it. I think we have sold a fair amount of merchandise, and we have yet to remove a piece of equipment."

So far, Mr. Hecht pointed out, "we have found, and believe we will continue to find, not an obstacle in securing a little more money for, a far better and superior job.

High Price Argument

"To explain high price I often follow this line of reasoning when talking to the prospect: In 99 per cent of the cases, the average man you are talking to is insured, and certainly he does not expect to receive any return on his insurance.

"Year after year he cheerfully pays his premium for fire or liability insurance on his premises, and certainly doesn't wish or hope for any catastrophe of any type in order to collect his insurance.

"Gentlemen, the additional 10 per cent or 15 per cent that we might quote on an evaporative condenser in conjunction with regular unit sizes is the additional insurance which the customer pays on a piece of equipment in order to get increased life.

"I don't know whether you do or not, but we never sell on a year's basis. There is absolutely no point in making a Carrier installation with the feeling that it will last only one year —which is the limit of the regular guarantee.

"Our responsibility on a job we install never ceases. We try to make it trouble-proof and fool-proof for a good many years."

Hearman Tells How He Equipped Display Room

A showroom where a real demonstration of the various units can be given—that is what an air-conditioning dealer needs, states J. Harry Hearman of Trenton, N. J.

"I have one," he says. "It is 25 ft. long and 21 ft. wide. I didn't engage an architect, because I knew very well that I was in about the same position as a man in the automotive parts business—if you buy one truck from one dealer, you have one friend and a hell of a lot of enemies.

"That was the reason I didn't have an architect in putting together this room—I wanted the good will of *many* architects."

"I had the double flooring ripped up," Mr. Hearman went on, in describing his showroom, "and after thoroughly cleaning up all the splinters resting on the ceiling underneath, had a vacuum cleaner take up even the dust that remained.

Used Mineral Wool

"We then placed 900 lbs. of mineral wool between the beams, making it about 4 in. deep. That acts as an insulator for both heat and noise.

"Then we wired the job. It's a good rule to put in twice as many outlets and cross wires as you think you need; for if you do that, you will come out just about right. That is what we did. We are now just one wire short."

"It is next necessary," he explained, "to decide on the location of the air-conditioning units, and then put in the plumbing.

"We placed the under-flooring," he continued, "and covered it with a ¼ in. of felt paper, then we put down a 1¼-in. colonial cellulized oak flooring, which is a flooring that water doesn't affect—it doesn't leave the dark stains that you would ordinarily get with a little drop of water, and it is obtainable ready-finished in 4-, 6-, and 8-in. widths.

Cork Walls and Ceiling

"We then used 2-in. furring strips, ⅞ in. thick, and nailed them on the ceiling, running the long way of the ceiling, 12 in. on centers.

"After that we took slabs of Armstrong cork—we are not selling that, but it is good cork—12x32 in size and 2 in. thick, and we ran those slabs on the furring strips.

"I you have bad walls or bad ceilings, you can level everything up with these furring strips, the same as they do for metal ceilings. Our building is 117 years old.

"We nailed these slabs with three long finishing nails to each side of each slab—a nail with a small head was driven up into the cork, and a nail set was used to shove them in.

"Each row was laid with the joints staggered like bricks, with each joint being at the center of the slab above it, and starting from the top with a full slab, so that the odd width, if any, would come at the bottom.

"A spray gun was used to put on two coats of thin aluminum paint, which was followed with five very thin coats of a mere ivory color. The color we tried to approximate was travertine.

"The trick is not using thick paint that might cover better, but which would fill up the holes. We wanted those holes.

"Our cork board, for 5 in. above the floor, was set back 1½ in. We placed a tubing to the units in this space, and packed them in with mineral wool. Then we placed an 8-in. removable base on that. This base is just screwed on, instead of being nailed.

"The three doors into the room are regular birch doors. A frame was placed around the edge of each of these, with the proper taper to allow for opening and closing, and deep enough to take another slab of cork.

"We left the door in its natural color.

"I used $1,100 worth of cork in insulating my home. Every bit of the second floor ceiling, including all the frame parts, is insulated with this 2-in. cork.

Casement Windows Installed

"The five regular windows were just regular double-sash windows. We left those right on the outside of the building where they were.

"Of course, we had to do something about the furring and the extra 2 in. of cork. So we had new window frames made, but we had them made wider and alongside of the frame that was already in there, and we put in double windows.

"In other words, they are casement windows. Those windows (and this is a trick) are filled with cathedral glass, in a light amber color. It doesn't make any difference whether it is raining outside or not, through these windows it looks as though it were sunlight outside.

"At the same time, you never have your customer's attention detracted by what is going on outside, because they can't see through the glass. It keeps your mind on your own business, too.

"We then trimmed those French casements with 4-in. conventional stock trim. Between the inner and outer windows, of course, there was quite a bit of space. We installed venetian blinds.

"On the inside of these windows we have heavy Burgundy-colored drapes, reaching almost to the floor, with the conventional tie-back.

Furnishings Used

"An American Oriental rug with a heavy Ozite pad under it is set off by a 9-ft. oval mahogany table. Ordinarily there are two mahogany arm chairs on each side, and one at each end. The table is in the center.

"There is an overstuffed chair down at one end, and a davenport at the other end. That completes the room's furnishing, except for a radio which has a very cleverly concealed cellarette in it.

"Just inside the entrance to the room is a closet. In that closet is a 5320 W.M. compressor.

"I have my office which is just two rooms away from the display room, air conditioned, too.

"We also have a radio display room to which dealers from the central part of the state bring their customers just as though it were their own place. We are going to air condition that room this coming year, putting in a 3-hp. job.

Excess Air to Store

"You hear about lots of people making rooms out of cellars. We are going to make a cellar out of a room. With one installation we can handle three rooms at the same time, and we are also going to put in an electric damper control to run those three rooms at the proper temperature.

"Instead of shutting the machine down, the damper will open up and throw the cool air down into the store below—making a sort of cellar out of it.

"What do we do with this room? Besides bringing in regular prospects, I offer its use every once-in-a-while to the boards of directors and committees of the Chamber of Commerce, to the civic clubs, and to various other groups for sales meetings.

"Insurance companies, for instance, are great ones for having their monthly meetings. They bring their salesmen in there.

"We can handle 25 to 26 people. We have 13 mahogany arm chairs, and we have 13 of the ordinary folding, canvas-seated armchairs that you find on the ocean-going vessels. You might wonder why we have 13 of each. We always get a sample first, and then we buy.

Recalls First Order

"My first order, strange to say, was the easiest," recalled Mr. Hearman, "I was president of the Trenton Chamber of Commerce for two years, and during that time I had the pleasure of selling the cables for the California bridge, a nice little order for the Roebling Co. of $5,800,000.

"I happened to be down at Spring Lake one afternoon. Mrs. Roebling was down there, and she said to me, 'What's new?'

"I said, 'Just what do you mean? In business?'

"She said, 'Yes, in business.'

"I said, 'The latest thing with me is that I carry Carrier air conditioners.

"She said, 'What would it cost to do Ferd's office?'

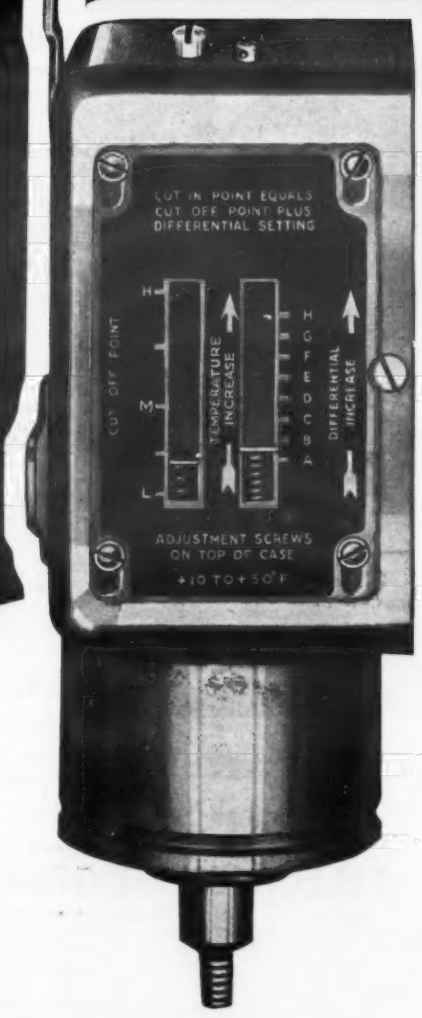
"Ferd said, 'I don't need it. Heat doesn't bother me.'

"She said, 'No, not down here at Spring Lake, but call me up tomorrow

(*Concluded on Page 18, Column 3*)

The Visible Scale REFRIGERATION CONTROL

Accurate adjustment, quick and simple installation ..... less servicing


CUT IN POINT EQUALS CUT OFF POINT PLUS DIFFERENTIAL SETTING
CUT OFF POINT
TEMPERATURE INCREASE
DIFFERENTIAL INCREASE
ADJUSTMENT SCREWS ON TOP OF CASE
+10 TO +50°F

VISIBLE SCALES are standard equipment on Minneapolis-Honeywell Refrigeration Controls. They eliminate the hit or miss method of adjustment, as with ordinary controls, and save untold time in service and installation . . . Locking devices and mercury switches are other features which make the Minneapolis-Honeywell line superior, yet these controls cost no more. For performance, economy and durability, specify Minneapolis-Honeywell Refrigeration Controls. Minneapolis-Honeywell Regulator Co., 2807 Fourth Ave. South, Minneapolis, Minn. Branch and distributing offices in all principal cities.

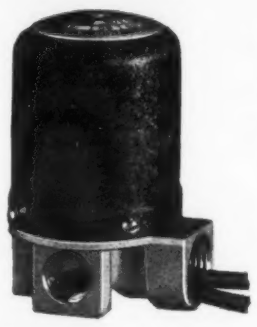
MINNEAPOLIS-HONEYWELL

CONTROL SYSTEMS

BUYER'S GUIDE

MANUFACTURERS SPECIALIZING IN SERVICE TO THE REFRIGERATION INDUSTRY

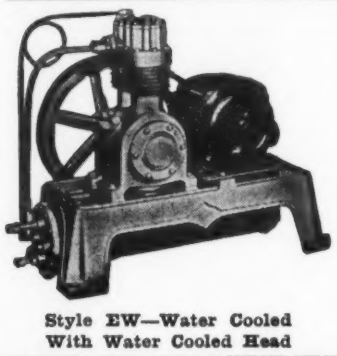
SPECIAL ADVERTISING RATE (this column only)—$12.00 per space. Payment is required monthly in advance to obtain this special low rate. Minimum Contract for this column—13 insertions in consecutive issues.



REFRIGERANT CONTROL

is simplified by use of the 73-R solenoid valve. Has these outstanding features: drop forged body, impact type plunger, completely sealed coil, 5/32" orifice, ⅜" pipe connections, will operate at 200 lbs. pressure and is carried in a wide range of voltages. Write for Bulletin 401.

AUTOMATIC PRODUCTS COMPANY
121 N. Broadway Milwaukee, Wis.



STARR FREEZE
OUTSTANDING PERFORMANCE
attested by satisfied users
— EVERYWHERE!

Sturdy Condensing Units from 80 to 2868 Lbs. I.M.E., and all other commercial refrigeration equipment—Wall type cases with machinery—A beautiful household line of modern, conservative styles—Write for full data.

THE STARR COMPANY
Cable "Starr" Richmond, Indiana (factory) U. S. A. Since 1927
1344 S. Flower St., Los Angeles, Calif.

Style EW—Water Cooled With Water Cooled Head

RANCO THERMOSTAT

The Stainless Steel **RANCO KRS** fills the replacement needs of practically every household refrigerator, water cooler and ice cream cabinet.

OVERSIZE DIAL PLATES are available for large mounting panel holes, and will be furnished in place of standard plates at no extra cost.

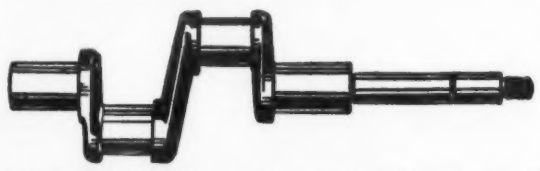
MARKING—Every model is stamped with factory code number and temperature settings. Lever and dial positions are plainly marked on the plate.

MAINTENANCE—Designed to reduce the cost of maintenance and repair. No broken bases or covers.

For complete information write for Service Bulletin 628

THE AUTOMATIC RECLOSING CIRCUIT BREAKER COMPANY
1300-10 Indianola Avenue Columbus, Ohio

SHAFTS . . . Crank and Eccentric for Compressors, made to YOUR Specifications.

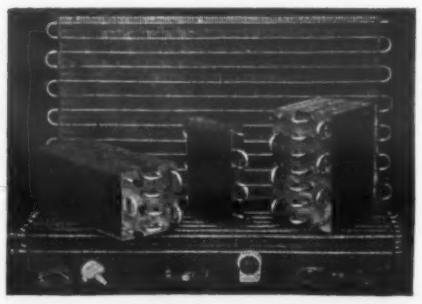


Manufacturers— Send Blue Prints for Quotations.

MODERN MACHINE WORKS, INC.
Specializing in the Manufacture of SHAFTS
2207 Kirkwood Ave. Cudahy, Wisconsin

CONDENSING UNITS AND COMPRESSORS FOR HOUSEHOLD REFRIGERATION BY

JOMOCO, INC.
A SUBSIDIARY OF THE JOHNSON MOTOR CO.
Waukegan, Ill.
CABLE ADDRESS: JOMOCO-WAUKEGAN



Rempe "FIN COIL" Company

Steel-Copper-Aluminum

State Distributors Wanted
Liberal Discounts

340 N. Sacramento Blvd.
Chicago, Illinois Kedzie 0483

Methyl Chloride, Freon, Sulphur Dioxide and Ammonia

BOUND VOLUMES
of ELECTRIC REFRIGERATION NEWS

A limited number of recent volumes are available. Each of the following volumes contains all weekly issues of Electric Refrigeration News issued during a period of four months. Stiff paper board covers.

Vol. 8—Jan. 4 to April 26, 1933. (Serial Nos. 198 to 214.)
Vol. 9—May 3 to Aug. 30, 1933. (Serial Nos. 215 to 232.)
Vol. 10—Sept. 6 to Dec. 27, 1933. (Serial Nos. 233 to 249.)
Vol. 11—Jan. 3 to April 25, 1934. (Serial Nos. 250 to 266.)
Vol. 12—May 2 to Aug. 29, 1934. (Serial Nos. 267 to 284.)
Vol. 13—Sept. 5 to Dec. 26, 1934. (Serial Nos. 285 to 301.)

Price $3.00 per volume, f.o.b. Detroit. Shipment will be made by express collect unless otherwise specified. Please send remittance with order.

Electric Refrigeration News, 5229 Cass Ave., Detroit, Mich.

AIR CONDITIONING

Enthusiastic Users Help Sell Prospects on Air Conditioning

(*Concluded from Page 17, Column 5*)

and tell me how much it would cost.'

"The next day I called her up. It so happened to be a tough job, for the water supply is limited. We put in two 1530 semi-automatic coolers, at a cost of $1,530.

"Our entire expense for the plumbing, I believe, was something like $25 or $26—that is, for the material and the labor. That was practically the only cost of making the installation.

"Then came a contract for air conditioning part of the home of James Kerney, editor and principal owner of the three Trenton newspapers. This was a heating-cooling job in a new house that had cost plenty to build, but which wouldn't heat properly.

"Our display room helped a lot in getting that order.

Trouble Heating Home

"Mrs. Kerney told me they were having trouble heating their living room. I said I had just joined up with the Carrier organization, and that they had a bunch of experts over there and I knew some time when a Carrier man was in town, he would come out and tell her what was wrong.

"The first thing I knew, the oldest Kerney son came down to the display room, and I was invited to figure on the job. Gentlemen, I landed that job at $3,910.

"Our room also helped me land the Stacy Trent Coffee Shop, in installation which cost $3,000. Messrs Meyer and Crocker, owner and manager, respectively, came down to the showroom at 11:30 at night, and spent nearly an hour there. That was all they needed to know. The job cost $3,406.

Whole House Conditioned

"Mrs. G. N. J. Sommers," Mr. Hearman went on—still in a reminiscent mood, "the wife of a very prominent surgeon and doctor in Trenton, came down to see us in answer to an advertisement we ran in the local paper. After enjoying our room for a while she said, 'This is certainly marvelous.'

"I had given her a price of $1,200 for two rooms on one compressor, with three buttons in the room. She could push one of the three in either room, and the job would start or stop.

"She said she liked the idea so well she thought it would be a mighty good thing to have for the whole house, and that they would wait a little while until they could arrange it.

"That sounded like bologna to me at first, but they took 10 weeks off late this summer and went to Europe, so that their house could be done. They spent $9,000, including redecorating, carpenter work, and a lot of alterations around the place. The Carrier end of the job ran $2,833."

Davis Cites Value of Users in Making Sales

W. J. Davis of the Brandeis Machinery & Supply Co., Louisville, believes that the majority of our air-conditioning and commercial refrigeration sales have been made because of the enthusiasm of his users. Customers of this concern are so well satisfied that they will go to prospects and help with a sale.

"We have equipment in the two leading hotels of Louisville and in the largest department store," he says. "We do not hesitate to tell the management of any of these places that we are working on such and such a prospect, as we know that they will go out of their way to assist us in making the sale.

Hotel Man Host to Prospects

"I personally know of a case in which the manager of one of the hotels called up prospects and asked them to come to his hotel for lunch with him, and then brought up the subject of air conditioning. We sell this hotel all its mechanical equipment, and the manager became so sold on the equipment that he purchased stock in Carrier Engineering Corp. without our knowledge.

"The department store has given us a number of prospects. It is the leading store in our city. They have shown us letters from other stores inquiring as to the success of their air-conditioning installation. In some cases we have been permitted to help frame the replies.

"We have felt that in order to have customers feel toward us as these people do, we have had to give them a little more than they thought they were getting when they purchased their equipment," explains Mr. Davis.

"When service difficulties arise, we have a man on the job as soon as possible. We believe that properly engineered and installed installations are a great asset. We have never in any case argued with the customer but have assumed the responsibility, and have taken care of it immediately. We believe that enthusiastic users are the best salesmen that a sales organization can have.

"All jobs are more or less competitive, and we have found that without the services of a competent consulting engineer there is always some chiseler who pops up with a low-priced compromise job. With a good consulting engineer looking after a client's interests, all bidders are required to bid on the same basis, and the purchaser will secure a good job.

"For instance: one of the Louisville hotels decided to purchase equipment. We submitted a price after estimating the job to be 30 tons. One of our competitors submitted a price approximately 30 per cent under ours, with an estimate of 20 tons. We were unable to sell this job against this competition.

"This hotel is not satisfied with this installation, has had a great deal of trouble, and has more or less defeated the purpose for which the equipment was purchased. Its executives now regret that they did not spend the additional money. Had they employed a consulting engineer, this would not have happened.

Lowest Bidder Goes Up

"In another case there were six of us fellows bidding on a job with prices ranging from $2,500 to $6,000. The purchaser was on the verge of letting this contract to a low-figure bidder. He was persuaded to secure the services of a consulting engineer. The original low bidder then was the highest bidder. He added $5,000 when bidding according to specifications.

"We had another case in which a local mortuary was thinking of purchasing air-conditioning equipment. One of our competitors submitted a proposition under $2,000 for 6 tons of refrigeration.

"Our estimate was 20 tons, and our price was more than double that of this competitor. A consulting engineer was employed for this job, and so it became a Carrier installation.

"We find that more and more of the higher class jobs are going through the consulting engineer and architect. The majority of these fellows welcome any engineering information you can give them," states Mr. Davis.

Separate Department Formed

The Brandeis Machinery & Supply Co. has had the Carrier contract for two years, and has been in the contractors' machinery business for the past 30 years. A separate department was set up to handle the Carrier line. The sales, installation, and service are distinctly separate from the machinery division.

The air-conditioning department is charged with a certain portion of the overhead of the business. In this manner its overhead is considerably lower than if we were set up as a separate institution.

Carrier sales in Louisville for 1934 were over $100,000, and were handled *at a profit* with a small organization consisting of one combination engineer and salesman, a junior engineer, a secretary, and the installation men. Mr. Davis expects to double this in 1935.

FINANCIAL STATEMENTS

Universal Cooler Corp.

DETROIT—Universal Cooler Corp., for the fiscal year ended Sept. 30, 1934, showed a net loss from operations of $108,716,91, the annual report, issued recently to stockholders, reveals.

Sales during the fiscal year increased to $3,792,382 from $1,337,959 in the preceding fiscal year.

In his report to the stockholders, the late G. M. Johnston, as president of Universal Cooler Corp., outlined the company's position as follows:

"Unfortunately, on account of delays in commencing our extended program, 50 per cent of our volume of business occurred in a two months' period, which meant an enormous increase in inexperienced labor, with the result of excessive manufacturing expenses and costs, all of which resulted in the operating loss as shown. You will note that our sales increased from $1,337,959 for the previous year to $3,792,382 for this year.

"During the year we have made several changes toward strengthening our organization and preparing for the consolidation of our previous expansion, as well as having our new business commencing on Nov. 1, with definite orders to carry us through the winter, which will eliminate crowded operations such as we had this year. We are, however, still faced with the seasonal trend of our industry."

Air Conditioning Aids Quality & Production Of Chewing Gum

HOW an air-conditioning system operates to improve the quality of chewing gum and to eliminate costly production delays is told in a recent issue of *Food Industries* by C. E. DiVivo, plant engineer of the American Chicle Co.

The plant of the American Chicle Co. in Long Island City, N. Y., is equipped with a Carrier air-conditioning system that uses 450 tons of refrigeration and which delivers 115,000 cu. ft. of conditioned air per minute.

Air conditioning is necessary because chewing gum is sensitive to changes in temperature and humidity. On cold, dry days it becomes so hard that it cannot be worked properly. On warm, moist days it becomes soft, with the same result.

Furthermore, to be palatable, chewing gum must have a certain quantity of moisture in it. To obtain this, the product must be processed in rooms where the humidity is above a certain level. But the humidity must not be too high, because excess moisture makes it too soft to be handled by the wrapping machines.

Central System Used

Refrigeration is supplied by a central system, consisting of three compressors and a common Beaudelot-coil room, where the water for conditioning the air is cooled as it trickles over some 8,000 ft. of direct-expansion coils arranged in two banks for flexibility of operation.

With the centralized system, when the refrigeration demand falls off, the load can be carried with one or two compressors and one bank of Beaudelot coils.

The conditioning units are described as "humidifier-dehumidifiers." These units consist of four parts. The first is an air-mixing chamber where recirculated air from the room is combined with outside air in proper proportion. Louvres controlling the quantities of the two kinds of air admitted are controlled in turn by a thermostat located in the spray chamber of the unit.

Operation of Air Intake

In winter, if the dew-point temperature becomes too high, the thermostat, through compressed-air controls, manipulates the louvres to bring in more cold air from outside.

If, on the other hand, the dew-point temperature is too low, more air is taken from the room and recirculated. In the summer, the system functions in the reverse manner, the seasonal change-over being made merely by operating a valve.

After being properly proportioned, the air moves at a velocity of 500 to 600 ft. a minute through the spray chamber, where a rain of refrigerated water saturates it at a certain temperature (brings it to a certain dew-point temperature).

A thermostat in the spray chamber controls the dew-point temperature through a three-way mixing valve which combines the cold water from the Beaudelot coils with water from the bottom of the spray tank to furnish a spray of the required temperature.

The dew-point temperature is the factor which controls the relative humidity, since it determines the quantity of moisture the air will carry from the air conditioner.

From the spray chamber, the air is delivered by a pressure blower over heating coils controlled by a thermostat in the room into which the air discharges.

After leaving the steam coils, the air passes through "no-draft" ducts with one or two outlets per bay to the various points in the room being conditioned. These ducts have a larger cross-sectional area than the blower outlet so as not to restrict the flow of air, and they usually extend across the center of the room to provide even distribution.

Ceiling ducts are used so that the cool conditioned air will settle by virtue of its greater density and give proper distribution from floor to ceiling.

The thermostats that automatically control this air-conditioning system are adjustable so that the dew-point and dry-bulb temperatures may be regulated to give different temperatures and humidities. Of course, the range of adjustment is limited, for the units were designed to meet certain fixed conditions.

To check the thermostat settings to make sure that the temperature and relative humidity are correct, a recording thermometer which measures wet-bulb and dry-bulb temperatures is used.

York to Air Condition 21 Railroad Cars

YORK, Pa.—Reading Railway Co. has awarded an order to the York Ice Machinery Corp. for air conditioning 21 of its cars and 10 cars of the Central Railroad of New Jersey.

BUYER'S GUIDE

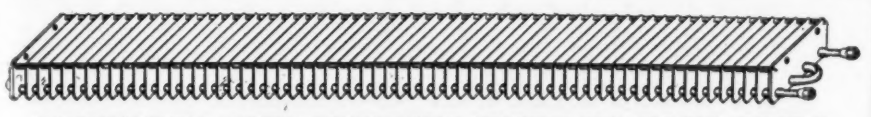
MANUFACTURERS SPECIALIZING IN SERVICE

TO THE REFRIGERATION INDUSTRY

SPECIAL ADVERTISING RATE (this column only)—$12.00 per space.

Payment is required monthly in advance to obtain this special low rate.

Minimum Contract for this column—13 insertions in consecutive issues.



PEERLESS "OFF-CENTER" DISPLAY CASE COILS

1½", 2", 3", 3½", 4", 4½" High

A NEW COIL—A NEW PRINCIPLE—Incorporating the NEW RIFLED Tubing and

Like ALL PEERLESS COILS—NO SOLDERED RETURN BENDS

"Where there are no joints there can be no Leaks"

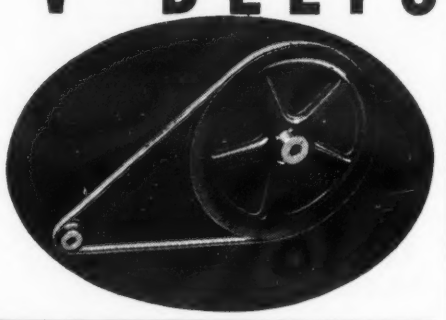
Send for *your* bulletin

PEERLESS ICE MACHINE COMPANY

CHICAGO — 515 W. 35th ST. — TWO FACTORIES — NEW YORK — 43-00 36th ST. L.I.C.

DAYTON V-BELTS

There is a Dayton V-Belt made especially for all makes and types of refrigerators, washing machines and other appliances. A stock is available near you. Send for price list and name of your nearest distributor.



THE DAYTON RUBBER MFG. CO.

DAYTON, OHIO

The world's largest manufacturer of V-Belts

RACKS KOILS KOOL

THE TRADEMARK OF FOUR

PACE SETTERS

IN COIL EFFICIENCY

SUR-E-FEX — Fin Coils

FAN-E-FEX — Diffusing Units

HUM-E-FEX — Non-Dehydrating Coils

AIR-E-FEX — Air-Conditioning Units

SEND FOR NEW CATALOG DESCRIBING THESE SENSATIONAL DEVELOPMENTS

REFRIGERATION APPLIANCES, INC.

H. J. KRACKOWIZER, Pres.

1342 WEST LAKE ST., CHICAGO

FOR REFRIGERATION PRODUCTS

KRAMER

UNIT COOLERS — EVAPORATORS — CONDENSERS

TRENTON AUTO RADIATOR WORKS

Main Offices and Factory, TRENTON, NEW JERSEY

NEW YORK, 210-212 West 65th Street — PITTSBURGH, 5114 Liberty Avenue

Group Subscription Rates

The following special rates are for PAID-IN-ADVANCE subscriptions only in the United States and Possessions and Pan-American Postal Union Countries. Charge orders are billed at the single-subscription rate, regardless of number. Papers will be mailed to individual addresses.

	Electric Refrigeration News (weekly)	1935 Refrigeration Directory and Market Data Book (2 volumes)	Both Electric Refrigeration News and Refrigeration Directory
1 subscription	$3.00	$5.00	$6.50
5 or more each	2.75	4.50	6.50
10 or more each	2.50	4.00	6.50
20 or more each	2.25	3.50	5.75
50 or more each	2.00	3.00	5.00
75 or more each	1.75	2.50	4.25
100 or more each	1.50	2.00	3.50
For All Other Countries (Except Canada)			
1 subscription	$5.00	$6.00	$9.00
5 or more each	4.75	5.50	8.50
10 or more each	4.50	5.00	8.00
20 or more each	4.25	4.50	7.50
50 or more each	4.00	4.00	7.00
Canadian Rates (including tariff of 5 cents per copy on the News)			
1 subscription	$6.00	$6.00*	$11.00*
5 or more each	5.75	5.50*	10.50*
10 or more each	5.50	5.00*	10.00*
20 or more each	5.25	4.50*	9.50*
50 or more each	5.00	4.00*	9.00*

*Canadian subscribers are required to pay a tariff and excise tax on the Directory and Market Data Book which amounts to $2.59. These extra charges on books will be collected by the Canadian postoffice at the time of delivery.

Subscription Order

Business News Publishing Co.
5229 Cass Ave., Detroit, Mich. Date.....

☐ Enter my subscription to Electric Refrigeration News for one year (52 issues).
☐ Send the 1935 Refrigeration Directory and Market Data Book (2 volumes).
☐ Enclosed find remittance. (See rates above.)

Name .....

Attention of
In Care of .....

Street Address .....City and State.....

We sell the .....refrigerator and .....
(Please indicate other products or principal line of business.)
1-30-35

QUESTIONS

Iroquois History

No. 2042 (Attorney, Illinois)—"I request you to inform me (1) of the name and address of the present manufacturer of the Iroquois electric refrigerator and also (2) the name and address of the former company which, I understand your 1934 DIRECTORY shows, is out of business.

"If you can give me the names and addresses of the officers of these two companies and any other information regarding them I will appreciate it."

Answer: The Iroquois electric refrigeration unit was manufactured by the Barber Asphalt Co. at its Iroquois Works, Buffalo, N. Y., and according to our records the refrigerators were merchandised by the Iroquois Electric Refrigeration Co., a sales subsidiary of Barber Asphalt Co., which operated at 1600 Arch St., Philadelphia, Pa. The Barber Asphalt Co. may be addressed at Buffalo, N. Y.

Liquidation of the Iroquois refrigeration business was reported being carried on about the middle of 1929, and Certificate of Dissolution for the Iroquois Electric Refrigeration Co. was reported filed with the Secretary of State of Delaware on April 17, 1931.

The officers for the year 1927 for Iroquois Electric Refrigeration Co. were given in ELECTRIC REFRIGERATION NEWS as follows:

Arthur W. Sewall, president; C. W. Bayliss, vice president; Frank Seamans, vice president; A. L. Robinson, vice president; E. R. Riter, secretary; Ira Atkinson, treasurer. These officers were said to be identified with the Barber Asphalt Co., the parent company.

The Sept. 5, 1934, issue of ELECTRIC REFRIGERATION NEWS gave the corporate history of the Iroquois Electric Refrigeration Co.

List of Manufacturers

No. 2043 (Manufacturer, New York)—"We note in your issue of Jan. 2 that the Liberty Refrigeration Corp. is to manufacture refrigerators carrying the Macy brand. We wonder if you would be kind enough to give us the address of the Liberty Refrigeration Corp. as we are very much interested in obtaining a satisfactory source of supply.

"At the same time would you find it convenient to give us a complete and up to date list, separately, of all household and commercial refrigerator manufacturers indicating whether they manufacture the complete boxes, or the units and boxes separately."

Answer: Addresses of manufacturers of complete household electric refrigerators, including Liberty, are listed starting on page 262 of the 1934 REFRIGERATION DIRECTORY AND MARKET DATA BOOK. Manufacturers of household refrigeration systems only (*without* cabinets) are listed beginning on page 274. Manufacturers of household refrigerator cabinets are listed beginning on page 287.

These lists will be revised and brought up to date in the 1935 REFRIGERATION DIRECTORY, which will be off the press on or about Feb. 20.

Solution in Ranco Control

No. 2044 (Service company, New York)—"Kindly advise the name of chemical used in 'Ranco' type 'RA' Switch Bellows?"

Answer: The Ranco RA control used a non-freezing solution in the bellows element. We believe it was a solution of alcohol and water.

Ice Cream Freezers

No. 2045 (Distributor, Washington)—"I should very much appreciate receiving from you a list of manufacturers who make mechanical ice cream freezers.

"I am interested in a distributorship covering the state of Washington or the Pacific Northwest, handling these machines.

"I have been in the refrigerator business for the past nine years, as a dealer for new and used equipment, both commercial and domestic, all makes."

Answer: Manufacturers of ice cream freezers are listed starting on page 224 in the 1934 REFRIGERATION DIRECTORY.

Coin Meters & Clocks

No. 2046 (Distributor, Missouri)—"We are interested in obtaining a meter for meter sales plan, and would appreciate your advising us where we can procure same."

Answer: See below.

No. 2047 (Manufacturer, Michigan)—"Our distributor in England is interested in securing catalogs and detailed information regarding a coin electric clock, or budget electric clock, as used in this country in connection with the sale of electric refrigerators.

"Will you please furnish us with the name and address of the company manufacturing these electric clocks, so that we can write to them regarding this information."

Answer: Manufacturers of coin meters and coin electric clocks are as follows:

General Electric Co., Schenectady, N. Y.
Coin-A-Day
Eltime Clock Co. Div.
Electric Auto-Lite Co., Toledo, Ohio.
Budgetklok Co.
915 Washington Ave., Minneapolis, Minn.
International Register Co.
15 S. Throop St., Chicago, Ill.
Landis & Gyr, Inc.
104 Fifth Ave., New York, N. Y.
Mills Novelty Co.
4100 Fullerton Ave., Chicago, Ill.
Frank Pierman, Ottawa, Ohio.
Seeburg Corp.
1510 Dayton St., Chicago, Ill.
Zell Products Corp.
536 Broadway, New York, N. Y.

Humidification Chart

No. 2048 (Engineering and contracting firm, West Virginia)—"About two months ago in the issue of the NEWS, there was a chart showing the saturation point of air. We would like to have another copy of this issue."

Answer: We believe that the chart to which you refer is the one published on page 11 of the Nov. 7 issue of ELECTRIC REFRIGERATION NEWS. This chart was published in conection with an article dealing with winter humidification which was obtained from the Mitchell Fin Humidifier Co.

Makers of Small Models

No. 2049 (Manufacturer, Illinois)—"Because we do not, for the time being, have a small capacity refrigerator in our line (roughly, 2.5 net cu. ft.), it may be necessary, in order to temporarily help out one of distributors, to put them in touch with other manufacturers who make these midget refrigerators.

"We would appreciate it very much if you would send us, marked for the attention of the writer, a list of the manufacturers now putting out such refrigerators, whether top-opening or front-opening type."

Answer: Manufacturers who make household electric refrigerators of less than 3-cu. ft. net capacity are as follows:

Crosley Radio Corp., Arlington St., Cincinnati; Frigidaire Corp., Dayton; General Electric Co., Nela Park, Cleveland; Kelvinator Corp., 14250 Plymouth Road, Detroit; Leonard Refrigerator Co., 14260 Plymouth Road, Detroit; Norge Corp., 670 Woodbridge St., Detroit; Sanitary Electric Corp., Fond du Lac, Wis.; Westinghouse Electric & Mfg. Co., Mansfield, Ohio.

Specifications for small model electric refrigerators were published in the August 8, 1934 issue of ELECTRIC REFRIGERATION NEWS.

Australian Representative

No. 2050 (Distributor, Australia)—"We are indebted to Mr. John N. Nind, Jr. of the Periodical Publishing Co. of Grand Rapids, Mich., for your name and address as publisher of the ELECTRIC REFRIGERATION NEWS and the REFRIGERATION DIRECTORY AND MARKET DATA BOOK which we understand is $9 for the combined price for the two per annum, post free to Australia, and attached hereto we have pleasure in handing you money order for £1/17/6 which is equivalent to 9 dollars in U. S. A. currency, the exchange and commission having been paid in Australia. We would thank you to enter our subscription for a period of 12 months for the above-mentioned publications.

"We might mention that this company is looking around for a refrigerating unit for the lower-priced domestic refrigerator and one that is not already known on this market.

"The customs' tariff on American refrigerators complete into Australia is 75 per cent plus 10 per cent primage, plus exchange which today is in the vicinity of 25 per cent, making a total of around about 125 per cent, exclusive of inland freight, packing, sea freight, wharfage and cartage charges at this end.

"You will see by this that it will hardly be a commercial proposition to import a refrigerator complete.

"What we have in mind and what has been suggested to us by Mr. Nind is that we secure a well-known American-made refrigerator that is not already represented here and import the complete unit, also the hinges and lock, making in Australia the porcelain iron linings, wire shelves, outside case and assembling and insulating them in this country. At present that appears to us to be the best line to work on.

"Such people as General Electric, Frigidaire, Kelvinator, also Sparton are already represented on this market, but the line that appeals to us as being a reasonably good seller (i.e. if the price is competitive) is the Leonard which is rather well advertised in the American publications and also in the *Furniture Record*.

"Mr. Nind has suggested several companies who make complete units for electric refrigerators and we would thank you to supply any further records of reliable firms or manufacturers of either refrigerators or the units and who would sell the unit separately to us. We feel quite sure within the next few years quite a large trade can be developed in Australia in electric refrigerators.

"This company is a very well established one and has a selling organization throughout all the States of the Commonwealth and can make any financial arrangements that may be necessary.

"The electric motors would have to be suitable to the current used in Australia which for the most part is 3 phase, 50 cycle, 220 volts.

"Thanking you in advance to put us in touch with any manufacturer on your side who you think may be interested in our proposition and looking forward to receiving your publications in due course."

Riley Service Tools

No. 2051 (Service man, Ohio)—"I would like to get information on the service tools made by the Riley Engineering Corp., mentioned in the Jan. 16 issue of the NEWS. May I have a price list and description of the same."

Answer: The information you desire may be obtained by writing direct to Frank Riley, Riley Engineering Corp., 1481 14th St., Detroit, Mich.

CLASSIFIED

RATES: Fifty words or less, one insertion $2.00, additional words four cents each. Three insertions $5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Electric Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITIONS AVAILABLE

ESTABLISHED MANUFACTURER desires district representative to service existing distributors and secure additional outlets for air conditioning and commercial refrigeration in Middle Atlantic States. Engineering knowledge and previous experience this type of work essential. Opportunity for permanent profitable connection to right man. Box 669, Electric Refrigeration News.

WANTED—Experienced refrigeration, factory, distributor and dealer contact man thoroughly familiar with the trade. New England territory. Reply giving full details. Box 672. Electric Refrigeration News.

EQUIPMENT FOR SALE

ISOBUTANE: We ship Isobutane in your cylinders at: 5 lbs.—$1.50 per lb., 10 lbs.—$1.35, 25 lbs.—$1.10, 50 lbs.—$1.00. In our cylinders of 115 lbs. at $0.80. Shipments made the same day we receive orders. The Standard Refrigeration Co. of Pgh., 1148 Dohrman St., McKees Rocks, Pa.

WE ARE specializing in repairing receiver tanks, ½ HP Frigidaire-Kelvinator $12. One HP, $15. Grinding, polishing shafts up to ½ HP Frig-Kel etc. 50¢, 1 HP, 75¢. Rebushing seals up to ½ HP Frig-Kel. 75¢, 1 HP, 95¢. Silver welding ice cream coils with cadmium plating. Quantity discounts. Refrigeration Maintenance Company, 719 Atlantic Ave., Brooklyn, N. Y.

500 USED apartment multiple coils, 8 cu. ft., with floats, service valves and trays. Examples: Frigidaire 5TF—$3.50, No. 4—$3.25. Kelvinator 08V—$2.75. Fedders L28—$2.75, E4S—$2.50. Riser Valves 50¢, 3 valves in block $1.50. Terms: F.O.B. Chicago, Ill., and cash with order. L. H. Rykken, 3434 Nordica Ave., Chicago, Ill.

IN YOUR 1935 Refrigeration Business, use our Proven Hermetic Pumps or Complete Units. Domestic or Commercial Refrigeration Systems. We build water coolers, bottle beverage coolers, zero temperature ice cream units, and domestic units. Precision built, efficient, dependable, small, compact, portable, low costs. Inquiries solicited. Units available for test purposes. Box 671, Electric Refrigeration News.

½ Hp. model N. Frigidaire compressor complete $75.00. 1—1 Hp. model C complete $100.00; both in fine condition. New radiator type condensers, 14"x16" two row $5.00 each, 8¼"x10¾" two row $3.00 each, 8¼"x10" single row $2.25 each. Two tray Frigidaire Boilers $4.00 each. F.O.B. Chicago. Commodore Electric Company, 521 North Wells Street, Chicago.

REFRIGERATION SERVICE

HALECTRIC thermostat repair service. B & B, G.E., Cutler-Hammer, Penn, Ranco, Tag., etc. Float valve needles reground and polished. Expansion valves repaired. Gas service, Ethyl, Methyl, Iso-Butane, Sulphur. Your cylinder or ours. Competitive prices. Distributors of "Flawless Brand" tubing. Talectric Laboratory, 1793 Lakeview Road, Cleveland, Ohio.

SCHOOLS

MEN: Train for Refrigeration and Air Conditioning, at home, using same text material you would use in best resident school. Supervised individual instruction under licensed teacher with Doctor's degree. Shoeck School, Alton, Ill.

PATENT SERVICE

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. Van Deventer (ASRE), Patent Attorney, 342 Madison Avenue, New York City.